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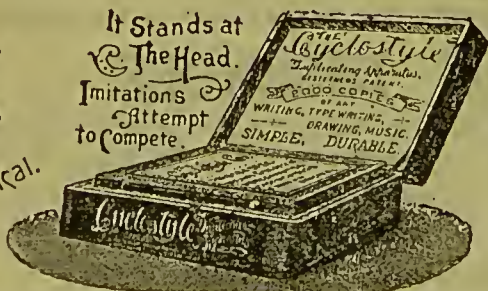
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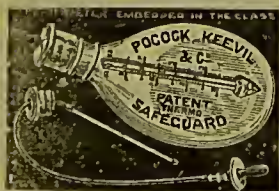
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Microscopic slides; gorgeous polarising, brilliant opaque, &c.; 5s. dozen; exchange; Henry Ebbage, 344 Caledonian Road, London.

Syphons, new, 6 dozen for sale, British Syphon Co.'s make; never been used. Highest offers to "Chemist," 132 Huddersfield Road, Oldham.

Gums, 14 lbs. good, 7d. lb.; 14 lbs. fine, 10½d. lb.; also bag, 56s. cwt.; another, 90s.; all below market price. Ayton, 293 Old Street, London; splendid value.

About 12 dozen Lawrence's spectacles and eyeglasses, convex and concave; retail, 5s. 6d., 3s. 6d., 2s. 6d., 1s. 6d.; no reasonable offer refused; whole or part; would exchange for anything useful. "Optical," 57 Calvert Street, Norwich.

Declining business.—On sale, cheap, 3 ft. 6 in. grinding pan, with steel scrapers, new, cost 36l., will take 18l.; also a large quantity of turned wood pillboxes, 1½ in. diam. by ½ in. deep outside, 1s. per gross; and 2 in. diam. by 1½ in. deep, 3s. per gross; small piping-press, &c., &c. Parkinson, 39 Dover Street, Manchester. Wonderful bargains; must be sold.

WANTED.

Small tincture-press. 675 Holloway Road. Copy Chemist and Druggist for February 12, 1887. Lloyd, Abergele.

cylindrical carboys. Send size and price to Holt, Castle Hill, Norwich.

Cooley's "Cyclopædia," Atfield's "Chemistry"; last editions. Taylor, 23 Cromwell Place, S.W.

Beasley's "Pocket Formulary," small tincture press. Andrews, 19 The Terrace, Camberwell, S.E.

Chemist and Druggist, Nos. 299 to 308 inclusive, also 403 and 405 wanted; all or none; send price. Watson, Caistor.

The Chemist and Druggist for January 5, 1889, and February 23, 1889; full price will be given by The Publisher, Chemist and Druggist, 42 Cannon Street, E.C.

Formula wanted for reliable ink, drying jet black, costing about 6d. gallon wholesale; a good furniture polish, costing under 1s. gallon; also for a really good blue-black ink; state prices. 236/9.

The Chemist and Druggist from January 1 to June 30, 1883; must be complete, with advertisements, and in good condition; state price. Publisher, The Chemist and Druggist, 42 Cannon Street, E.C.

"Life in London," "Life in Paris," "Boxiana," vol. 5, or set (5) complete, all by Pierce Egan; also any first editions Dickens' Works, good condition; send price. Burnell, Appledore, Devon.

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GREAT REDUCTION IN PRICES.



We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best-known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

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For Second Quality Ginger Ale.

Imparts Pungency, Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma.

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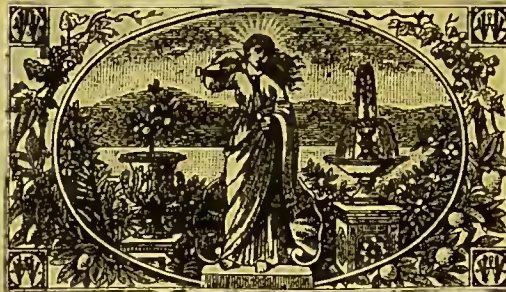
his Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.

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Imparts to Lemonade all the Fine Aroma and Flavour of the choicest Lemons.

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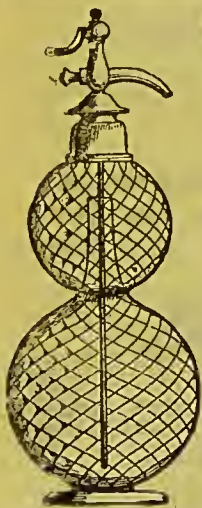
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THE CHEMIST & DRUGGIST

SUPPLEMENT.

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, MARCH 16, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 8 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE, and crossed MARTIN & Co.

OFFICES: 42 CANNON ST., LONDON, E.C.

CHEMISTS' TRANSFERS.

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May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

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2.—LONDON, W.C.—Good-class profitable Business; Retail and Dispensing; returns nearly £700; well-fitted shop and good stock; about £650 required.

3.—LONDON, S.E.—Situate in main thoroughfare; Retail, Prescribing, and Dispensing Business of good class; returns nearly £800 yearly, with good profits; well-fitted shop and good stock; about £750 required.

4.—LONDON, SOUTH.—Very old-established Business, situate in a main thoroughfare; no immediate opposition; capital opportunity for extension; present returns £600, under manager; full particulars on application.

5.—LONDON SUBURB, N.—Retail, Dispensing and Prescribing; established 20 years; returns £500 yearly; very profitable; double-fronted shop and good stock; good house, and capital garden; rent low; price to be arranged; vendor will deal liberally with an immediate purchaser.

6.—LONDON, E.C.—Death vacancy; very profitable Retail and Family Business; returns average nearly £400; convenient house and good shop; about £300 required.

7.—MIDDLESEX.—First-class Business; Retail and Dispensing; returns average over £900 yearly, with good profits; large handsome shop, and good house attached; about £850 required.

8.—HANTS.—Very profitable Retail and Prescribing Business; returns nearly £600 yearly; net profits considerably above the average; large shop, good house and garden attached; about £600 required.

9.—LEICESTERSHIRE.—Vendor retiring; old-established Mixed Business (Chemist's and Grocer's); held by vendor over 30 years; the premises are well suited and very commodious; vendor's own freehold; new lease will be granted; returns nearly £3,500; terms, small premium and valuation.

10.—NORTH DEVON.—Unopposed Mixed Country Business; returns about £800 yearly, with good profits; well-fitted shop and excellent stock; convenient house, may be purchased if wished; price for business £500.

11.—NORTH OF ENGLAND.—Good-class increasing Business; returns last year £720, with good profits; small house; small rental; about £600 required.

12.—WEST OF ENGLAND.—Good market town; first-class Retail and Dispensing Business; returns nearly £1,000; handsome shop and good stock; about £950.

13.—KENT.—Large town; very profitable Retail and Prescribing Business, with large sale of Proprietary articles; returns nearly £850; well-fitted shop and good stock; about £800 required.

14.—WORCESTERSHIRE.—Family Retail and Dispensing; situate in commanding position; returns average £817, with good profits; large house, laboratory, &c.; attractive garden; about £750 required.

Personal applicants may receive particulars of businesses not advertised.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co.'s Register is open either to Principals or Assistants FREE OF CHARGE.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the special attention of a London agent.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

PARSON C. BAKER,

3 Stockbridge Terrace, Victoria Station, S.W.,

CHEMISTS' VALUER AND TRANSFER AGENT,

invites vendors to submit particulars of businesses for disposal, having cash purchasers for businesses of all kinds, especially good-class country. P. C. B. offers skilled assistance to gentlemen about to purchase. Most buyers would save the cost incurred many times over, and often avoid serious error. Terms strictly moderate.

Kent.—A good-class Retail, Dispensing, and Family trade, returning £600, at good prices; population 3000; no opposition; rent £60; double-fronted shop, well fitted and stocked; good house and garden; 15 years in hands; price £600.

Manufacturing town, Staffordshire.—A prosperous and rapidly increasing genuine Cash Retail, returning over £1,000, and showing net profit over £400; good house and shop, well stocked; every facility for investigation; price about the value of stock and fixtures, £700; this is recommended as a money-making business in good going order.

East Coast Watering-place.—Old-established but neglected business, now doing only £280; will double itself in good hands; rent £28; price, valuation, under £200.

Manchester, Chorlton Division.—An old-established Retail and Prescribing, now much reduced, will be sold for value of stock and fixtures, under £150; rent only £30; now returning only £250; a good prescriber and tooth extractor will do double in a very short time.

North London.—Good thoroughfare; neglected branch; a few months since did £9 weekly, now only £4; will take £180, and part can remain; good man will double the returns in 6 months; any reasonable offer will be considered.

KENT.—For immediate disposal by valuation of stock and fixtures, a small Business; established over 50 years; no other Chemist within 3 miles; convenient house with garden; rent £30. Apply to "Chemist," Green Street, Teynham, Kent.

S.E.—Well-stocked and fitted Shop, with household effects complete; returns about £5 a week; rent let off; rare bargain for a beginner; first reasonable cash offer accepted to ensure an immediate sale. B. Couzens & Co, Rye Lane, Peckham.

DRUG TRADE.—Thomas Tomlinson & Son, 9 New Cannon Street, have, in consequence of death, a sterling Business, returning £1,300 a year, in a nice clean town in Yorkshire, on the border of Lancashire; excellent chance; about £550 to £600 required.

CHEMIST, Druggist, and Stationery Business, with small Landing Library, to be disposed of, previous to coming season; stock and fixtures at valuation, about £200; rent £28; side entrance, yard, &c. Apply, G. Morley, 10 Lumley Road, Skegness, Lincolnshire.

CARDIFF.—A Prescribing, Dispensing, and Retail Chemist's Business for immediate disposal; splendid position; nice neighbourhood; low rent; price about £300. Apply, with references, to "Glas," c/o Barclay & Sons (Limited), 95 Farringdon Street, London, E.C.

LONDON, West-end.—Good class Dispensing Business in capital position, and returning £800 yearly; very profitable; many years same hands; satisfactory reason for selling; price £750. "Camphor," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

THE nucleus of a good Business in a very improving neighbourhood, North London; only opened last June; will be sold for a very low price, present owner having purchased a larger business in S.W. district. For full particulars apply, A. P. S., 12 Reighton Road, Clapton, E.

YORKSHIRE.—Mixed Business, returning over £500, at good profits; in thoroughfare; good house and shop; price £350; good proprietaries and teeth-extracting with prescribing; as a going concern. Apply, "Mixed Business," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A SPLENDID Retail, Dispensing, and Prescribing Business with Dentistry; established 30 years; best stand in heart of manufacturing town; population 70,000; proprietor retiring; incoming low; a very rare and exceptional opportunity. E. Hopwood & Son, Estate Agents, Stockport, Cheshire.

A THOROUGH Retail and Dispensing Business, conducted on the Score principle of ready-money and low prices; returning nearly £2,000 per annum; in a large Lancashire town; price £750, or offer; satisfactory reasons for disposal. Apply, "Statin," 65 Caledonian Road, King's Cross, London, N.

EASTERN COUNTIES.—Genuine unopposed mixed Agricultural Business of good class, with Gibbey's Agency; good shop, well fitted and plate-glass front; large house and good garden; rent on lease £25; rates nominal; returns £560 with good profits; will take £300. P. O., Wiltons, Francis & Butler, 101 High Holborn.

TWO Businesses; good town in the Midlands; retail cash trades; excellent house and premises at the principal; lock-up branch, easily worked; net profit £300; cash price of the two £700, value of fittings and stock; no agents; good reason for disposal. X., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WORCESTERSHIRE.—Retail, Dispensing, and Prescribing Business for sale; beautiful neighbourhood; good house, garden, greenhouse, and warehouse; returns upwards of £700; about £550 required; vendor taking larger business; only cash buyers treated with. "Statin," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£100—An exceptional opportunity occurs for acquiring for this nominal sum (being less than half value of stock and fixtures) a well-established and profitable business in best position of leading town in South Wales; a sure income at once obtained; part of purchase money could remain. Mr. Thurgood, 41 Wind Street, Swansea.

MANCHESTER (Suburb)—Old-established Retail, Dispensing, and Prescribing Business; Post-office attached, producing £35 per annum; well-fitted shop; good and convenient house; moderate rent; returns about £500; opening for Dentistry; stock and fixtures at valuation, goodwill £50, or offers. Address "Beta," Messrs. Evans, Sons & Co., Hauover Street, Liverpool.

DEATH VACANCY.—The Executors are prepared to receive offers for a good-class Business in a country town, South of England; same hands 25 years; returns average over £750; exceptionally good profits; can be increased by younger man; income of £500; reasonable offer entertained. "Executor," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

GENUINE Dispensing and Retail, showing net profit of £400 to £500 (about), within 40 miles of London, in Surrey (preferred), Hants, or Berks; no agents need apply. State full particulars and price, &c., to "Percy," care of Mr. Edie 43 Fifth Avenue, Queen's Park, Harrow Road, N.

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STAFFS.—Partner, with view to succession; General Light Retail, and Prescribing; fair dispensing; good own specialities; returns £1,000; net profit £400; half share £400, or for the whole £750.

LONDON, N.W.—Shop fair, house good, garden small; Dispensing Prescribing, and Retail; returns £400; price £250; Manchester; returns £300; price £150.

LEICESTERSHIRE.—Death vacancy; returns £900; excellent residence; large profits; price £900, or as arranged.

PARTNER.—Eastern Counties.—Returns approach £2,000; can be doubled; energetic man with £900 would be accepted.

CORNWALL.—Retail, Prescribing, and Dispensing; returns £450, increasing; rent on lease small, and covered by easy agency; price £250; an exceptional chance.

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3s. 6d. for fifty words; 6d. for every 10 words beyond.

CO-OPERATIVE Drug Company; most satisfactory reasons for selling; business situated in a fashionable watering-place. Address, G. E., care of Evans, Lescher & Webb, Bartholomew Close, London.

TO Chemists and Druggists.—South Kensington.—Shop and 4 rooms in first-class position; long lease at low rent of £75; fixtures and stock £50. Apply, Minty & Harris, House Agents, 16A Fulham Road, S.W.

A GOOD old-established Dispensing and Light Retail Business, in the West of England, for disposal; price £600. For full particulars apply, "Rose Crucis," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

OLD-ESTABLISHED Business for sale; main thoroughfare; long lease; good house; returns £380; net rent £44; price £250. Address by letter, T. C., care of Messrs. Smith & Co., Lezengo Makers,

WANTED, by a Chemist in bad health, a Business at a seaside resort near the sea; must be a good house in fair repair. Address, "Bore," care of Messrs. Heaton, Squire & Francis, 5 Coleman Street, E.C.

WANTED a good Retail Business, suitable for a Doctor, to carry on a Cash Practice at the same time; good receipts and little opposition desired. Particulars will be received in confidence by W. Hornibrook, Medical Agency, 17 Bloomsbury Street, Oxford Street, W.O.

SALES BY AUCTION.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO BE SOLD by Auction, at the New Inn Hotel, Gloucester, on Friday, 29th day of March, 1882, as a going concern, the Stock, Fixtures, and Goodwill of the old-established Business, situated in the best part of Newnham-on-Severn, Gloucestershire, now in the occupation of J. Handeman, Chemist. For particulars apply to Mr. Morton, Auctioneer, Ludlow.

Re Dale & Plant (Limited).—Important Unreserved Sale of OILS, VARNISHES, Paints, Colours, Brushes, Artists' Materials, DRUGS, Drysaltery, Machinery, Fixtures, Fittings, and various Effects, at 81 and 82 Smallbrook Street, 57 Inge Street, and 20 and 22 Bishop Street, Birmingham. To be Sold by Auction,

BY MESSRS. FRANK SMITH & WILSON, on Tuesday, Wednesday, Thursday, and Friday, March 19, 20, 21 and 22, and Tuesday, March 25, commencing each morning at 10.30 prompt, in consequence of the number of lots (by direction of J. Walter G. Hill, Esq., Liquidator)—the valuable STOCK-IN-TRADE, including upwards of 3,000 Gallons of Varnishes and Oils, nearly all in 1-gallon cans; casks of Spirits, Gums, Resins, Glues, Colours, Paints; assortment of Brushes; large and perfectly new stock of

ARTISTS' MATERIALS,

including Papers, Canvases, Easels, Colours, Paints, Brushes, &c., pure Drugs, Drysaltery; PAINT-MAKING MACHINERY, comprising Paint-Grinding Plant complete; Tenoning, Mortising, and Planing Machines, Shafting Pulleys, &c.; wrought-iron Oil Cisterns and Tanks, Furnaces;

COSTLY SHOP FITTINGS AND FIXTURES;

Gasfittings, Weighing Machines; two useful Horses, Delivery Float, Trap Harness, and Miscellaneous Effects, catalogues of which may be obtained at the Offices of Messrs. Reece, Harris & Harris, Solicitors, 47 New Street; Messrs. Ellis, Munday & Bartrum, Solicitors, 19 St. Swinain's Lane, London, E.C.; Messrs. Dacley & Hill, Chartered Accountants, 88 Colmore Row; or of the Auctioneers, 37 Cannon Street, Birmingham.

TENDERS.

3s. 8d. for fifty words; 6d. for every 10 words beyond.

TO be Sold by Tender, the Stock, Fixtures, and Fittings of a Chemist's Shop, or the business to be sold as a going concern. Apply on the premises, 1 Broad Lane, South Tottenham.

TO be Sold by Tender, the old-established Business of a Chemist and Druggist, hitherto carried on by Mr. Alan McConnall, in the Market Place, Appleby, Westmorland, with the Stock, Shop Fittings, and Fixtures. The Stock is of great variety, and an extensive Dispensing business has been carried on for fifty years, this being the only one within a radius of ten miles.

It is believed that satisfactory arrangements for tenancy of the premises can be made.

An Inventory of the stock, &c., can be seen, and further particulars can be had on the premises.

Tenders marked "Tenders for Druggist Business," addressed Official Receiver in Bankruptcy, 2 Paxton Terrace, Barrow-in-Furness, will be received up to noon on the 30th instant.

TO LET.

TO Chemists and Druggists.—Shop and Residence in a respectable and populous neighbourhood; no chemist within the radius of a mile; rent £50. Apply to Andrew Hart, 192 High Street, Stoke Newington.

OXFORD STREET.—To be Let, splendid Shop premises occupying one of the finest business positions in the West-end; admirably suitable for a Chemist and Druggist's or any business, the success of which mainly depends upon handsome premises in a fine, prominent position commanding exceptional publicity. Apply to Messrs. Marler & Bennett, 275 and 176 St. Pancras Street, Belgravia, S.W.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, for April 1, a good English Correspondent for the Chemical Works and Wholesale Drug Business of Joh. Diodr. Bieber, Uhlenhorst, Hamburg.

WANTED, good Junior, one able to extract teeth preferred, by chemist and practical dentist; state age, salary, and experience. H. E. Field, 70 Oxton Road, Birkenhead.

COMPETENT ASSISTANT, with view to purchase; must have first-class references, and be a good prescriber and dispenser. Apply personally at 193 Brixton Road, S.W.

WANTED, an Assistant of good experience, competent to manage branch; a knowledge of Welsh desirable; vacancy end of April. Full particulars to E. Lloyd, Chemist, Abergyle.

MANAGER for small branch, with Post Office attached, between March 22 and 29; send particulars, age, experience, salary, and enclose carte. Marshall Leigh, Pharmacist, Brighton.

AGENTS wanted calling upon Soap Makers throughout the United Kingdom, to represent an article largely used in this manufacture. Address, K. O. 696, Messrs. Deacon's, Leadenhall Street, E.C.

TOWN TRAVELLER wanted, for the North and East districts of London; good commission. Apply, stating previous experience, &c., to 6/32, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE.—Energetic man wanted on Wet Floor; Minor by preference; duties light. Apply, firstly by letter, stating salary and qualifications, to F. I. C., Mr. Morgan, Stationer, 68 Henry Street, St. John's Wood, N.W.

ASSISTANT wanted, in a business comprising drng, wine and spirit, postal, &c.; he should be about 23 years of age; to a good man with capital a partnership might be offered. Apply, with full particulars, to W. Price, 11 Witham, Hull.

IMMEDIATELY, outdoor active Junior, for retail counter, about 22; accustomed to pushing general retail; must be quick and thoroughly reliable. Apply, stating age, height, references, and salary required, enclosing carte, Wand's Drug Store, Haymarket, Leicester.

A COMPETENT, qualified, trustworthy Assistant, of obliging disposition and steady habits; not under 24 years of age; single; indoors; only one kept. Full particulars as to age, salary required, experience, references to former employers, length of engagements, to E. Waller Martin, High Street, Guildford.

WANTED, by a Company, a responsible and energetic Representative familiar with the Chemical trade, and capable of doing business with Shippers and Merchants, and other outlets for goods in bulk, &c.; full and detailed particulars will be afforded and expected of applicants. A. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ENERGETIC Assistant or Manager; qualified; aged about 30; married; must have an all-round experience; a good salesman indispensable; tall and of good address; one seeking a permanency only treated with; state age, height, experience, and enclose carte; character and business ability must bear strictest investigation. Wand's Drug Store, Haymarket, Leicester.

SOUTH AFRICA.—Immediately, a good Assistant; single; must be steady, well up in Dispensing; preference given to one who can extract teeth; a Welshman and total abstainer preferred; aged from 20 to 24; qualification by exam. not necessary; two years' agreement; salary, first year, £5 per month, second year, £7 per month, indoors; comfortable home; second-class passage paid out. Candidates, who must hold undeniable references, apply to Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, London.

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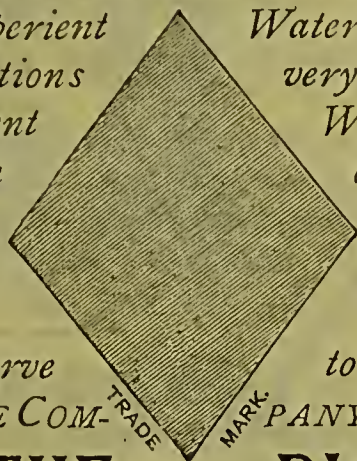
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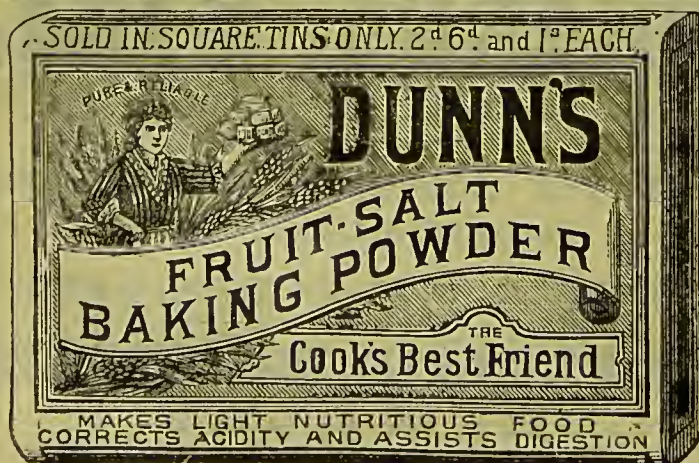
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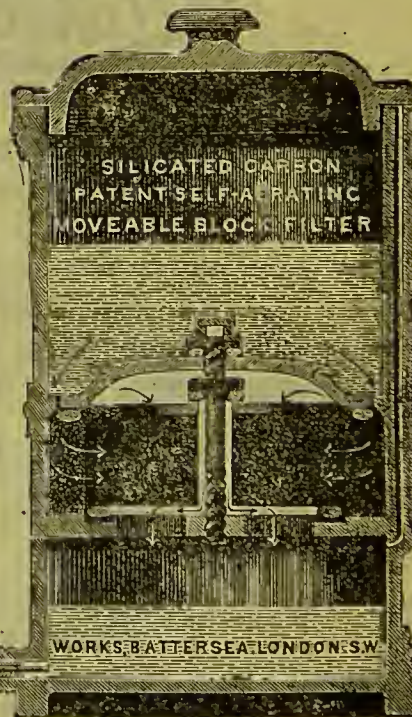
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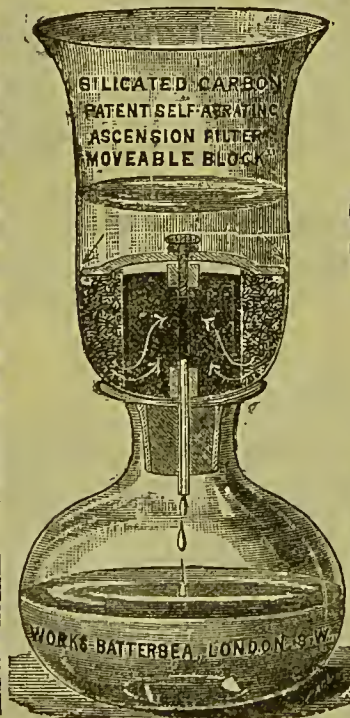
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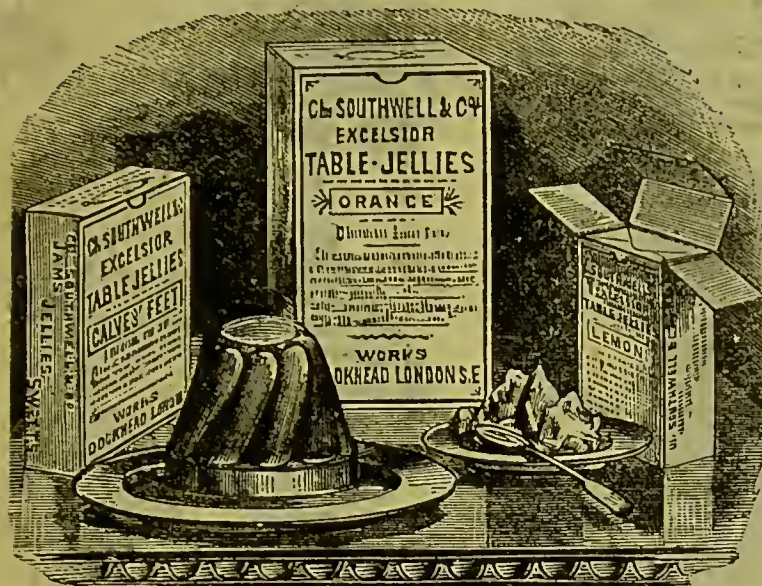
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1d. Sample Bottles, dozen parcels per gross	6/	extra quality	6/
1d. "Giant" Bottles, dozen parcels	6/	"	8/
1d. "Bottles (flat or round), reputed 1/2-pint	18/	"	24/
1d. "Bottles (flat or round), reputed pint	26/	"	32/
1d. 1-pint Imperial Round Stoppered Bottles	30/	"	36/
1d. 1-pint Imperial	50/	"	60/
12 1/2-gallon Casks (casks free) each	20/	"	32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.
A rich, fruity Sauce of fine flavour, and worth especial atten-
tion, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY: 113 WEST NILE STREET, GLASGOW.

Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.

BURGOYNE & CO., 16 Coleman Street, London, E.C.

JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.



EDWARDS'

DESICCATED and WHITE (Vegetable)

HIGHEST AWARDS:

International Health Exhibition,
London, 1884.

International Exhibition, Liverpool, 1886.

The Manufacturers beg to direct the attention of the Trade to the above articles, now commanding a ready
and remunerative sale. They are put up in a neat and attractive form, in

One Pound, Half-pound, and Quarter-pound Tins.

The DESICCATED SOUP—extract of Beef and Vegetables—is also put up in

One Ounce Packets.

These are packed in cases of 36 one pound, 48 half-pound, and 72 quarter-pound Tins; the penny packet
gross and half-gross boxes, in cases of 12 gross. Carriage, tins, and cases free. A liberal supply of show-cards,
glaciers, and printed matter, consisting of circulars, Medical testimonials, Press opinions, and counter bills with
name and address.

These preparations have now come largely into use, in preference to flour, as a thickening, and at the same
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SAMPLE, WITH TERMS, FREE ON RECEIPT OF BUSINESS CARD.

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Sole Manufacturers, Contractors to Her Majesty's Government,
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STREET, LONDON, E.C.

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MANUFACTURED BY THE AMSTERDAMSCH CHININEFABRIEK.

These Tablets are made from guaranteed Pure COCOA AND SUGAR; each Tablet contains 1 Grain
SULPHATE OF QUININE.

Quinine mixed with Chocolate is practically tasteless, and can be taken even by such persons who cannot digest
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BEST PREVENTIVE AGAINST FEVER, WEAKNESS, &c.

Apply for Samples
and Prices to

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"RAMORNIE." LIEBIG'S Extract of Meat.

As supplied to the War Office.

1-lb. Jars.....per lb.	8/2per doz.	74/0	2-oz. Jars.....per lb.	7/0per doz.	10/8
1/2-lb. Jars....."	8/4	....."	88/0	1-oz. Jars....."	7/8	....."	5/9
4-oz. Jars....."	8/7	....."	19/9	1/2-oz. Jars....."	8/0	....."	3/0

Write for Detailed Price List to the Australian Meat Co. 9 and 11 Fenchurch Avenue, E.C.

8 lbs. Carriage Free.

Clarke's Newly Designed "Pyramid" Nursery Lamp Food Warmer, with New Registered Panakin.



N.B.—NO ALTERATION IN THE PRICE OF THE OLD PATTERN "PYRAMID" FOOD WARMER.

CLARKE'S IMPROVED PANAKINS (REGISTERED) FOR USE WITH CLARKE'S "PYRAMID" NURSERY LAMP.

By this invention any liquid food can be poured out, or drunk, without scum or grease passing through the spout, and prevents spilling when poured into a Feeding Bottle, so objectionable with all other Panakins. These Panakins will fit all the old "Pyramid" Nursery Lamps, and can be purchased separately.

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LAMPS COMPLETE { " 2 ... 33/ " }
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N.B.—Extras.—Porcelain Panakins per dozen, No. 1 ... 8/ ... Lids ... 2/
" 2 ... 9/ ... " 3/ ...
" 3 ... 10/ ... " 4/

Tin Panakins, No. 1, 8/ ... No. 2, 10/ ... No. 3, 12/

Clear Glasses [4/ ... Roughed, 6/ ... Opaline, 8/ ... Coloured, 8/ ... Ruby, 8/

N.B.—Ask for CLARKE'S PANAKIN, and see that his name and the registered number (Registered 91,241) is on the Panakin, and trade mark "PYRAMID."

Clarke's Patent "PYRAMID" NIGHT LIGHTS are the only Lights suitable for these Lamps. Sold Retail by all respectable dealers, and Wholesale by the Patentee, S. CLARKE, "PYRAMID" AND "FAIRY" LIGHT WORKS, CRICKLEWOOD, LONDON, N.W. London Show Room—31 ELY PLACE, HOLBORN CIRCUS, E.C.

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For use with CLARKE'S "PYRAMID" NURSERY LAMP FOOD WARMER, with his NEW REGISTERED PANAKIN.

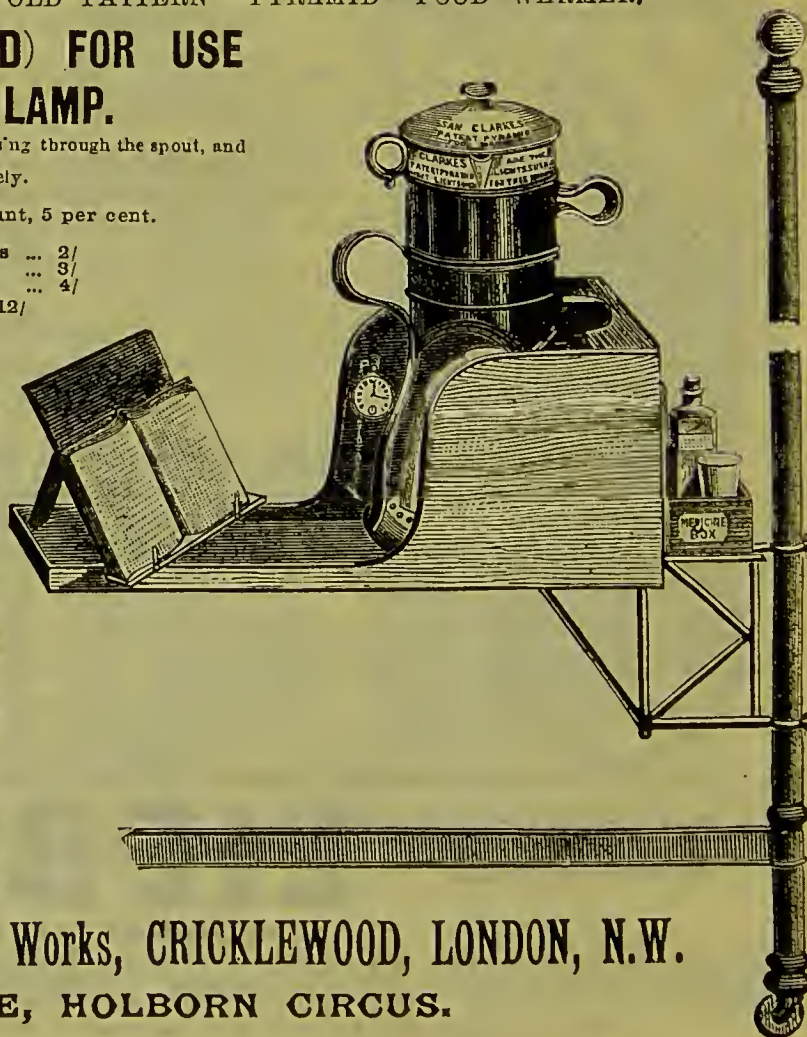
This is an invaluable Invention, and useful appliance at the BEDSIDE, suitable for Invalids, and particularly for Parents whose Infants require Feeding during the night. It obviates the necessity of getting out of bed, as everything required for use can be put on the TRAY. The Tray is adapted for use in connection with Clarke's "Pyramid" Food Warmer, and when not required can be turned to the wall in such a manner as to Shade the Person in bed from the Rays of the Light.

Invalids will find it a Great Comfort, for any book, plate, basin, &c., can be placed thereon ready for use, and obtained without altering the position in bed. By means of a Slide, the Tray can be pulled forward to the position or length required. It is Highly Recommended by the Medical Profession, and can be obtained from most dealers in Clarke's "Pyramid" and "Fairy" Lamps.

Tray, 15/, with Book Rest & Medicine Box, 21/, less 33½ per cent. Food Warmer, see above.

If with Brass Bracket, 4s. extra. Adjustable Brass Support for book rest, 5s. extra

DIRECTIONS FOR FIXING.—Place the Clips on and the bed-post, insert the Thumb-screw in the square hole at the end of same, and screw as tightly as possible. The Clips being of spring steel, they will fit any size post. A little cloth or wash-leather should be placed round the bed-post to prevent scratching the post.



SAML. CLARKE, "Pyramid" and "Fairy" Light Works, CRICKLEWOOD, LONDON, N.W.
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Telegraphic Address—CHEMICUS LONDON.

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The Ninth Annual Issue, delivered free to Members of the Trade by

F. NEWBERY & SONS, 1 & 3 KING EDWARD ST., LONDON, E.C.

ESTABLISHED A.D. 1746.

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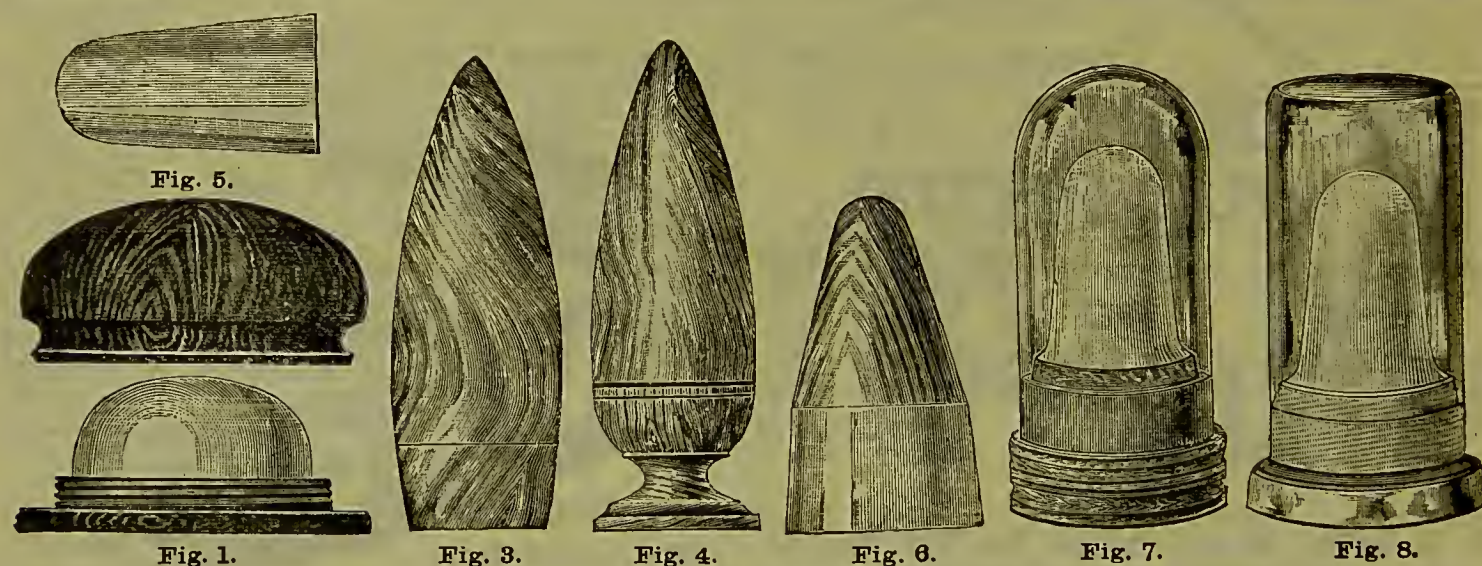


Fig. 1.	In Ebony Cases, flat for the pocket	Per doz.	4/8
	In Boxwood Cases, per doz., 2/9 and 3/6; in Vegetable Ivory	"	4 8
Fig. 3 & 4.	In Boxwood Cases, per doz., 2/3, 3/9, and 5/-; in Vegetable Ivory	...	...	...	...	...	...	"	4/6 and 5/3
Fig. 5.	In White Opaque Glass Jars with Red Celluloid Caps	...	...	...	...	...	...	"	2/3 and 3
	Mounted, in Stoppered Bottles	...	...	...	...	...	...	"	6/-
Fig. 6.	Mounted on Vegetable Ivory, in Glass Bottles, Screw Metal Caps	...	...	...	...	...	...	"	4/3
Fig. 7.	On Boxwood Mounts, Glass Covers	"	3/- and 4/
	On new Glass Mounts, Glass Covers	Per doz.	3/3, 3/9, 4/6, and 7/6
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Fig. 8.	On Glass Mounts with Glass Covers	"	4/- and 5/6

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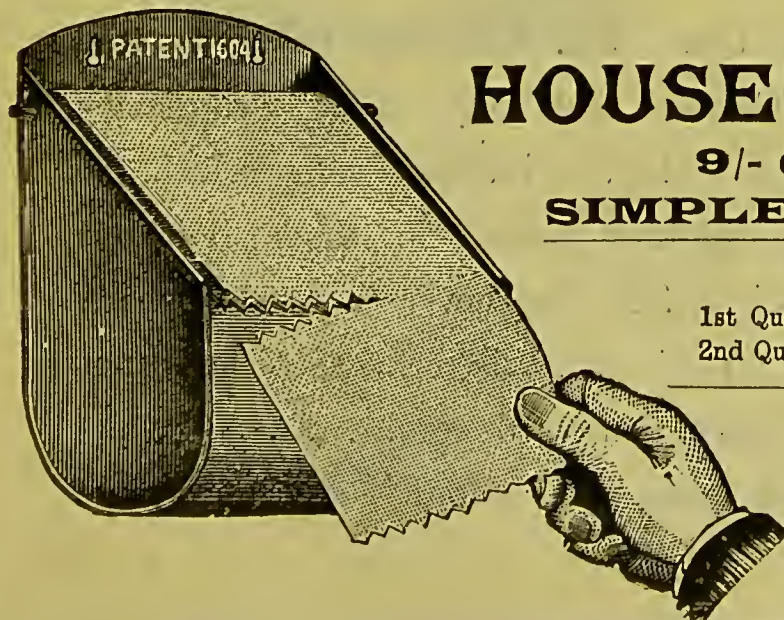
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An Ideal Form of Fat.

Cod Liver Oil rarely agrees when taken plain or on an empty stomach; in either case it is apt to derange the digestive organs, and even cause vomiting and diarrhoea. The more intimately fat is incor-



PLATE I.—A FAIR EXAMPLE OF THE COD LIVER OIL EMULSIONS OF THE MARKET, MAGNIFIED 400 DIAMETERS.

porated with the food we eat the more likely is it to agree with the stomach. Realising this, manufacturers have resorted to alkalies, etc., to subdivide cod liver oil, and lost sight of the fact that it is a food. The adjuvants were objectionable,



PLATE II.—EMULSION OF OIL AND MILK, MAGNIFIED 400 DIAMETERS.

and the mixtures oily, exciting disgust. "In all oil emulsions oil globules can as a rule be discovered without difficulty" (Godwin Clayton).

Plate I. represents an emulsion strong with essential oils and gums. So coarse are the oil globules, that a segment of one of them occupies a goodly part of the field. What wonder that many maintain that it is better to give cod liver oil plain than in emulsion!

Plate II. represents what is claimed to be the most finely divided of all emulsions. Not only does it go "queer," throwing down a precipitate, etc., but the size of the large circles (the small ones are milk) conveys a good idea of how indigestible must be the oil in even the *best* of emulsions.

The microscopic appearance of the globules in milk (Plate III.) forms a strange contrast with that of the two preceding products mentioned. The fat of milk is of course in a highly assimilable form.

Kepler has recently discovered a process by which cod liver oil can be perfectly dissolved in a

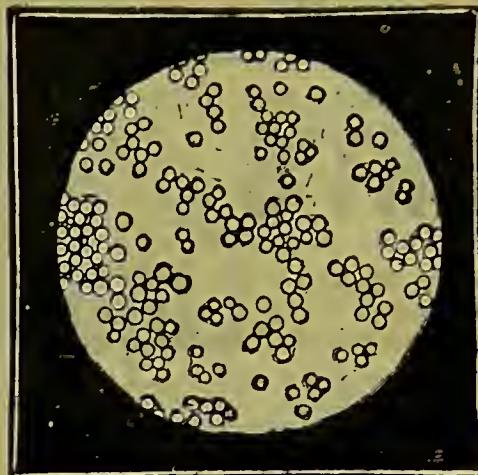


PLATE III.—PURE MILK, MAGNIFIED 400 DIAMETERS, SHOWING OIL GLOBULES.

properly prepared extract of malt. This product is called the *Kepler Solution*. It is more quickly absorbed and assimilated than any other known form of cod liver oil preparations. It is as sweet and palatable as cream. *Kepler Solution* does not dis-



PLATE IV.—Kepler Perfect Solution* of Cod Liver Oil, Magnified 400 Diameters.

turb the stomach like emulsions, and "under the microscope (Plate IV.) no oil globules are visible, and the field is perfectly clear." It is simply a combination of two foods—oil dissolved in malt—and this is why it agrees better than oil and chemicals. It is in no sense an emulsion, for, as Mr. Godwin Clayton says, "its constituents are in a condition of more intimate admixture, namely, that of Solution."

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For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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WE have pleasure in announcing to Continental subscribers that henceforth, by arrangement with the post offices of the various countries, subscriptions to THE CHEMIST AND DRUGGIST can be paid at any post office in Austria-Hungary, Belgium, Denmark, Germany, Holland, Norway, Russia, and Sweden at our rates, namely 10s. per annum including postal delivery to subscribers in any of those countries. Subscriptions may date from the first issue of any month.

TO AMERICAN MANUFACTURERS.—Our representative, Mr. T. E. Parker, will pay a business visit to the United States and Canada during the next few months. Mr. Parker will leave England on March 23, and will be in New York early in April. He intends to also visit during his tour Philadelphia, Boston, Chicago, Pittsburgh, Baltimore, St. Louis, Cincinnati, Detroit, Toronto, and Montreal. Letters for him may be addressed to Mr. Harry V. Dakers, office of THE CHEMIST AND DRUGGIST, 45 Liberty Street, New York.

The Chemist and Druggist of Australasia.

FEBRUARY 1, 1889.

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Editorial Notes:—"Intercolonial Reciprocity"; "The Pharmaceutical Society of New South Wales"; "Colonial Degrees in England"; "Homœopathic Medicines"; "Join your Society."

COLONIAL REPORTS.

New South Wales.—Pharmaceutical Society (Official Report of Monthly Council Meeting); Examination Papers of the Pharmaceutical Society; Local and Trade News.

New Zealand.—Pharmacy Board (Report of Ordinary Meeting); The Midland Pharmaceutical Association of New Zealand (Official Report of Monthly Meeting); Decisions of Customs Department; General and Trade News.

Queensland.—Pharmacy Board (Official Report of Monthly Meeting); Pharmaceutical Society (Official Report of Council Meeting); Trade News and Local Intelligence.

Tasmania.—Report of Meeting of Hobart Chemists' Association; General and Trade News from Hobart, Launceston, &c. &c.

South Australia.—Pharmaceutical Society (Official Reports of Council and Annual Meetings); Trade Notes and Miscellaneous Items.

Victoria.—Pharmacy Board (Reports of Meetings held November and December, 1888); Examination Papers for the Certificate of the College of Pharmacy, Melbourne; The Pharmaceutical Society (Reports of Meetings); Intercolonial Medical Congress of Australasia (Report of Second Session, when various Papers were read, and an Address on Pharmacology was delivered by Baron F. Von Müller, K.C.M.G., a full Abstract of which is given); Trade Notes and General News.

Dispensing Notes; Births, Marriages, and Deaths; The Melbourne Centennial International Exhibition (Jury Awards).

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Correspondence—Intercolonial Reciprocity; Interchange of Certificates and Diplomas; The Examination of the Apothecaries' Hall, Dublin; Reciprocity of Pharmaceutical Diplomas; Prices in Queensland; Duboisia Myoporoides; Action of Pyridine; The Victorian Examinations; Inquiries.

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Copies may be obtained at the London Office, 42 Cannon Street, E.C., 6d. each, or the journal will be supplied to subscribers to THE CHEMIST AND DRUGGIST at 5s. per annum, post free.

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THIS work has been written for us by Mr. E. N. Alpe, of the Solicitors' Department, Inland Revenue Office, Somerset House, a gentleman who has wide experience in and intimate knowledge of administration of the Acts which regulate the sale of proprietary medicines. The Handy Book is, consequently, of exceptional value to chemists and druggists, more especially in showing how medicines are made liable to stamp-duty by labelling, circulars, and the like. Reviewers have been unanimous in stating that the work is not only complete, but interesting and invaluable. It is as free as possible from legal phraseology, is readable, and is nicely got up. Price 2s. 6d., or by post 2s. 9d. May be obtained through the wholesale houses in the same way as "The Art of Dispensing."

"THE ART OF DISPENSING."

THE third edition of this work is now ready. Price 3s. 6d., or by post 3s. 10d. May be ordered along with ordinary goods from the principal wholesale houses, who supply it at the published price, 3s. 6d. A list of the firms who hold stock will be supplied on application.

This book may be obtained in Australia from the office of *The Chemist and Druggist of Australasia*, Normanby Chambers, Melbourne, price 5s.

Our agent in New York, Mr. Harry V. Dakers, 45 Liberty Street, will supply "The Art of Dispensing" to American pharmacists at \$1.25 per copy, post free.

"The Art of Dispensing" may be obtained from Evans, Sons & Co. (Limited), Montreal, B. G. Lennon & Co., East London and Port Elizabeth, and Lennon & Tebb, Cape Town

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the exercise in qualitative analysis for this month will be a mixture of two salts. The mixture is to be submitted to a thorough systematic examination, designed to detect the actual constituents of the mixture, and to demonstrate the absence of all other substances. Students' reports should contain a concise account of the work done, and should include a list of the metals and acid radicles detected, distinguishing any which may be regarded as accidental impurities.

Students' applications for portions of the mixture of salts will be received up to the morning of next Wednesday, March 20, and the samples will be forwarded immediately.

Students' reports will be received up to Wednesday, April 3.

REPORTS.

The mixture of salts distributed for analysis on February 20 consisted of 1 part of ammonium-mercuric chloride (*sal alembroth*) and 2 parts potassium nitrate. The calculated composition of 100 parts of such a mixture is:—

Hg	..	..	..	..	..	16.84
K ⁺	25.74
NH ₄	..	..	..	..	..	3.03
Cl	..	..	..	..	..	11.95
NO ₃	..	..	..	..	..	40.93
H ₂ O	..	..	..	..	..	1.51
						<u>100.00</u>

The mixture did not contain any impurity in appreciable quantity.

Sixty-nine students sent in reports this time, and out of that number twenty-three, exactly one in every three, failed to detect ammonium, although the quantity in the mixture was 3 per cent. Nearly 41 per cent. of the nitric radicle escaped detection by fourteen students; ten were unable to detect mercury, and seven failed to find potassium.

On a former occasion we pointed out the great delicacy of some reactions by which ammonia can be detected, and described a simple and convenient way of applying a test depending upon the use of calcium hydrate, and the reaction of ammonia with moist litmus and turmeric paper. We recommend our contributors before attempting to apply this or any other test to a salt of unknown composition to try what they can do with a solution known to contain ammonium. Reading an account of an experiment, and actually trying it, are very different things. In the study of the experimental sciences the reading counts for very little; it is by means of experiment that real knowledge—knowledge which can be usefully applied, and is not readily forgotten—is acquired. The student of chemistry should regard his text-book as a guide for pointing out the experiments to be tried. The very best books only give a fraction of the information that may be learnt from the experiment itself. The book shows how to learn: it is the experiment that teaches. The failures in the detection of the two nitrogen compounds in this mixture are clearly due to the want of real knowledge of the experiments to be performed. Almost every student who failed could probably describe in an examination paper how to test for ammonium or nitric acid; but it is another matter to perform the experiment successfully. The best way to avoid a repetition of the

errors is to repeat the experiments, and try to find out the reason why they failed before. It is a very good plan to work with solutions of known strength, and to ascertain to what extent the solution may be diluted before the indications obtained with it become too uncertain to admit of the substance in solution being detected. Beginning with a solution containing 10 per cent. of ammonium chloride, and another containing 10 per cent. of potassium nitrate, it will be found a very interesting study to ascertain how much water may be added to each solution before it becomes too dilute to admit of ammonium or the nitric radicle being detected with certainty.

PRIZES.

The First Prize for the best analysis has been awarded to
THOMAS HENRY LIVESLEY, Cavendish Square, New Mills.

The Second Prize has been awarded to
F. J. ALLEN, 1 George Street, Plymouth.

Marks Awarded for Analyses:

Thomas H. Livesley (1st prize)	100	Ajax	..	..	..	80
F. J. Allen (2nd prize)	98	H. Bowden	..	..	..	80
A. W. S.	96	W. G. Wilkinson	..	..	..	78
H. Hamer	96	John Shaw	..	..	..	78
J. E. W.	94	Antipyrin	..	..	..	78
Crucible	94	T. R. Dodgson	..	..	..	76
Dum Spiro Spero	94	W. E. Fairweather	..	..	..	76
A. Shaw	92	S. Carter	..	..	..	76
J. Simpson	92	Chisel	..	..	..	74
J. Cammack	90	A. M. S.	..	..	..	72
H. A. W.	90	E. K.	..	..	..	70
Protasum	90	H. W. Colley	..	..	..	68
Danwer	90	W. Bell	..	..	..	66
A. W. B.	88	J. W.	..	..	..	65
Alum	88	A. Osborne	..	..	..	65
J. W. Swainson	88	Rad. Gent...	..	..	..	65
A. Lazenby	88	Osmium	..	..	..	63
Ann Theridia	86	G. Myers	..	..	..	62
Figaro	86	Camelia	..	..	..	60
Tento	85	J. Gill	..	..	..	60
Nosirrah	85	F. N. Whitehead	..	..	..	60
Syntax	85	Faint Raphael	..	..	..	60
Testator	85	Veronica	..	..	..	60
Anonymous	85	Tryo	..	..	..	60
Ergo	85	Potassium	..	..	..	55
Chekan	85	Nil Desperandum	..	..	..	55
Aniline	85	John Howie	..	..	..	55
E. Winzer	85	Glencoe	..	..	..	55
L. A. Smith	85	Yarra Yarra	..	..	..	50
Y. E. T.	82	Dranoel Snoisses	..	..	..	45
J. E. Jackson	82	J. Laycock	..	..	..	40
Jasmin	82	Kensington	..	..	..	30
J. H. Eanson	80	H. A. S.	..	..	..	20
Dornar	80	T. Thompson	..	..	..	15
Silver	80					

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

•• All communications should include the names and addresses of the writers.

PROTASUM.—You were not far astray in your estimate of the quantities; students are not, however, expected to give quantitative results.

J. W. SWAINSON.—Your results with platonic chloride were contradictory. This reagent behaves in very much the same way with potassium and ammonium, in the presence of either of which you cannot use the reagent to detect the other, unless you subsequently examine the precipitate.

CHEKAN.—It was only from the quantity of residue left when the ammoniacal salts were expelled by heating that any opinion could be formed as to the quantity of potassium in the mixture.

L. A. SMITH.—It is probable that your sodium carbonate contained a trace of sulphate.

Y. E. T.—A test for ammonium which failed to detect 3 per cent. is evidently not of much value, at least—in the way you applied it.

J. E. JACKSON.—It is unsafe to rely solely upon the sense of smell for the detection of ammonia.

JASMIN.—See remarks to "J. E. Jackson."

J. H. EUNSON.—It is not very clear what you meant by "no fumes of ammonia given off on heating with potassium hydrate." Fumes were not to be expected under the circumstances. You will find it instructive to ascertain by experiment what is the smallest quantity of ammonia that you can detect.

SILVER.—There must have been something very defective in your mode of operating, as the test is capable of detecting very minute quantities of ammonium.

ANTIPIRYN.—According to your report there was no ammonium evolved during the time the turmeric paper was exposed to the vapour of the boiling liquid. The inference is that all the ammonia was expelled before you applied the turmeric paper.

T. R. DODGSON.—Your mode of applying the flame-test for potassium is clearly at fault when it failed to detect such a large quantity of the metal.

CHISEL.—Your report was sufficiently full except in a few cases where it was not quite clear what inference you drew from the reaction observed. You did not assign any reason for concluding that potassium was absent. It is not necessary to give the equation.

W. BELL.—Your account of the examination of the sulphuretted hydrogen precipitate was so meagre that it was impossible to make out the cause of your error. The insolubility of mercuric sulphide in nitric acid distinguishes it from all the other sulphides.

A. M. S.—The quantity of the mixture sent is intentionally small. The analysis of a small quantity requires more study and consideration than the analysis of a large quantity of substance. In the former case it is necessary to consider carefully how the analysis is to be conducted, as there is not enough material to repeat the work in case of failure.

J. W.—The transition in the colour of the sulphuretted-hydrogen precipitate from white to black is very characteristic of mercury. Under no conceivable circumstances could a pure sulphur precipitate become black.

RAD. GENT.—The nitric radicle was the chief constituent of the mixture, and you do not seem to have done anything to detect it.

J. GILL.—The tartaric-acid test for ammonium was of course useless in the presence of a large excess of potassium. You ought to summarise your results: it was hard to make out your final conclusions.

SAINT RAPHAEL.—The black precipitate, which you so conclusively prove to be due to iron, consisted of mercuric sulphide. The action of sulphuretted hydrogen on the solution was not sufficiently prolonged, and you precipitated the mercury in the wrong group.

NIL DESPERANDUM.—Your cobalt sulphide consisted of mercuric sulphide. See remarks to "Saint Raphael."

GLENCOE.—You cannot claim to have proved potassium or the nitric radicle absent.

YARRA YARRA.—You seem to have added ammonium sulphide as a group reagent to the original solution, instead of adding it to the solution from which the mercury had been separated.

J. LACOCK.—If you had passed sulphuretted hydrogen through the liquid a little longer the orange-brown precipitate would have turned quite black. If tin had been present you ought to have been able to obtain a metallic bead by reducing the mixture before the blow-pipe on charcoal with sodium carbonate.

KENSINGTON.—Your conclusions are based upon far too little evidence. In order to arrive at the truth it is necessary to cultivate a much more sceptical frame of mind.

H. A. S.—You have not much chance of doing good work unless you practice on mixtures of your own preparation.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION will have a musical and social meeting at the Colonnade Hotel, Birmingham, next Tuesday evening.

SIMPLE SIMPLICITY. — *Orthodichlorovinylidichlorobenzyl-carboxylic acid*, *Metahydroxybenzaldehydphenylhydrazone*, and *Nitrobenzenhom-orthophthalopropylimide* are glibly spoken of in the Journal of the Chemical Society for March; but *Paramethoxybenzenylazoximepropenyl- ω -carboxylic acid* takes the cake. It is a host in itself, and is a sovereign cure for hiccup, if pronounced correctly a few times in one inspiration.

MRS. WINSLOW'S SOOTHING SYRUP figured largely at the inquest on a child of five months, who died at Hove last week. People would have it that the syrup was the cause of death, but Mr. Alfred Upton, surgeon, said that the idea had arisen from the supposition that the child got a dose of the syrup an hour before death, whereas it was a day before, and death was due to convulsions. He thought, however, that it was dangerous to give a child soothing syrup, and the coroner advised the mother not to use any more of it.

Provincial Reports.

BIRMINGHAM.

THE LOCAL CORONER held an inquest this week regarding the death of a child 3 years old, who had got hold of a bottle of spirits of salts and drunk some of the contents. The child died in the Children's Hospital a week afterwards.

ACTION AGAINST A CHEMIST.—At the Birmingham County Court on Tuesday, before his Honour Judge Chalmers, the Great Western Railway Company brought an action against Richard Brown, chemist and druggist, Spring Hill, Birmingham, to recover 2*l.* 3*s.* 7*d.* for carriage of goods from Antwerp to Birmingham. There was a counter-claim put in by defendant for 1*l.* 8*s.*, value of a portion of the goods lost, and 5*s.* 7*d.* alleged overcharge by the company. Five casks of vinegar were shipped from Antwerp to the Severn, and thence conveyed by Great Western Railway to Birmingham. On being offered for delivery to defendant he discovered that one of the casks was broken and empty, and he at first refused to take the goods, but ultimately did accept them. Mr. Adcock, for the defendant, admitted that the claim of the company was correct, less the 5*s.* 7*d.* for the carriage of the cask which was empty; and he contended that the company were liable for the loss of the one cask of vinegar. Mr. Dain, for the company, said he was prepared to prove that the cask was empty when the company received it from the shippers. The company had signed the shippers' receipt with a note that one of the casks was empty. Mr. Adcock argued that the railway company, being agents of the shippers, were liable. His Honour said he could not hold the company liable for the loss which had arisen before the goods came into their hands. He gave a verdict for the amount claimed by the company, less the 5*s.* 7*d.* overcharged, but refused costs.

BOLTON.

A CORONER ON THE SALE OF POISONOUS ACIDS.—The Bolton borough coroner (Mr. Rowland Taylor) held an inquest last Friday on the body of Mrs. Betsy Collier, 49 years of age, wife of a machine-fitter. The evidence showed that the woman committed suicide by taking oxalic acid, and it appeared that the acid had been purchased of Mr. James Hart, pharmaceutical chemist, Newport Street and Higher Bridge Street, Bolton. Mr. Arthur Bethell, assistant to Mr. Hart at his Bridge Street establishment, stated in evidence that a woman whom he believed to be the deceased came to the shop and asked for two-penny-worth (1 oz.) of oxalic acid. On his inquiring what she wanted it for, she replied that it was for taking ironmould out of a pair of trousers, for which purpose it was sometimes used by people. He supplied her with the powder, and labelled the packet according to Act of Parliament. (The Coroner remarked that this was perfectly right.) Witness added that he had often sold oxalic acid. In addressing the jury the coroner referred to the sale of carbolic acid, oxalic acid, and similar poisonous substances, expressed the conviction that the Government should alter the Act of Parliament with respect to the sale of such poisons, and make it a requirement that, as in the case of other poisons, these should not be sold without a witness being present, and the particulars of the sale being entered in a book. There was no doubt that poisons such as oxalic acid and carbolic acid were too easily obtained; and there had been cases in other towns as well as here where people had used them to commit suicide. The jury returned a verdict of "Suicide while in a state of temporary insanity."

BRISTOL.

A MYSTERIOUS DEATH.—On March 1 Fanny Hart (32), the wife of a policeman, called into the shop of Mr. C. B. S. Norton, chemist and druggist, Castle Street, apparently in a fainting condition. Mr. Norton tried to revive her with ammonia, and this proving fruitless, he sent for Dr. Robert Simpson, who called only to find the woman dead. Dr. Simpson could form no opinion as to the cause of death, and

an inquest was accordingly held, and adjourned until Monday of this week. It was suspected that the woman had died from the use of abortives, she being pregnant. The investigation of Mr. F. W. Stoddart, city analyst, showed, however, that the stomach, intestines, and lungs gave no traces of poison. He had also examined four bottles of domestic medicine. One contained some pennyroyal, another contained camphor liniment, but he could not say positively what the other two had contained; a fifth bottle contained about 3 oz. of astringent injection. Apparently, therefore, death was not due to poison, and the medical evidence went to show that deceased had walked smartly up Castle Street after dinner, and in her condition the exertion had brought on asphyxia, which was fatal. This view was taken by the coroner, and the jury returned the remarkable verdict "That the deceased died from asphyxia, but whether from a fit or produced from the application of strong ammonia there was no evidence to show." The jury also severely censured Mr. Norton as a chemist for not sending for a medical man immediately.

COLCHESTER.

POISONED—BUT WHAT WITH?—An inquest was held at the King's Arms Inn last week regarding the death of Mr. Robert Worts Darken, architect, which took place at his residence in Crouch Street on the previous Sunday, under suspicious circumstances. Deceased was 46 years of age, and, though his health has been rather indifferent of late, he was about as usual the previous week, even on the Saturday, when he called at his club and conversed with various people. He lived apart from his wife, but they were on amicable terms, and he called upon Mrs. Darken almost daily. The coroner, in his opening remarks, threw out the suggestion that deceased died from some kind of poison. He appeared to have been taking, from Mrs. Prosser's shop, a mixture of arsenic and iron for an eruption of the skin. Of course, said the coroner, that was a medicine that was dangerous in itself if a man took too much of it. He had sent round to all the chemists' shops in the town, and they all told the officer that they knew of no poisons that had been sold to Mr. Darken or anyone of his family or in any way connected with him. Evidence having been given by Mrs. Darken and others as to the deceased's condition before death, Mr. Henry Davidge, manager for Mrs. Prosser, chemist, Head Street, was called. He said that about five or six weeks ago deceased came to the shop and asked for a mixture of one ounce of solution of arsenic and one ounce of tincture of steel in an 8-oz. bottle filled up with water. He said he had mislaid the prescription. Witness inquired what he was to do with it, and on whose authority he was taking it, as it was an unusually large dose—seven and a-half minims of solution of arsenic in each dose. Mr. Darken told witness not to be alarmed, as it was a prescription he got from a doctor, and during Mr. Coles's lifetime he had had dozens and dozens of bottles. He apparently understood perfectly well what he was doing. On the strength of that, witness let him have the mixture. The dose was large, but not dangerous. He saw deceased a week after, and he rallied witness about being alarmed at the strength of the dose, and said he had taken it and his face was better. Mr. W. B. Wallis, L.R.C.S.I., the next witness, stated that he had advised deceased to discontinue the use of the arsenic mixture. He considered the dose excessive, and never gave more than two or three drops himself. He had attended the post-mortem examination, and had found nothing in the organs of the body to account for death. This Dr. Cook corroborated, also stating that on the Saturday night he took two of Scott's liver pills. [A servant of deceased also stated that he had taken a little medicine in the afternoon from a bottle, supplied by Mr. Wallis, to relieve pain in the stomach.] Dr. Cook then proceeded to describe the appearance of deceased before and after death. He was of the opinion that Mr. Darken died from the effects of a vegetable alkaloid, and not from the effects of the arsenical medicine. The symptoms would point to poisoning by a vegetable alkaloid, most probably belladonna, or it might be aconite. If the arsenic had killed deceased there would have been excessive purging, which there was not. The coroner, in summing up, commented upon the extraordinary and mysterious character of the case, but expressed his opinion that the jury might safely act upon the evidence

of Dr. Cook, and that no suspicion attached to anybody. The jury found that "Deceased died from the effects of some poison, but that how or under what circumstances he took it had not been shown."

EXETER.

A BROKEN WINDOW.—At the Exeter County Court on March 6, Messrs. Stone & Son, chemists, carrying on business at the corner of Alphington Street, St. Thomas, sued a cab proprietor named Priston for the sum of 28*l.* 17*s.*, being the amount of damages sustained by the breaking of a window. The evidence showed that, on the evening of January 14 last, the defendant's horse and cab were standing in the station yard, the driver being about 7 feet from the head of his horse. Suddenly the horse started after two other cabs. The driver ran after it, but could not catch it; and finally, after a hard gallop, the horse landed head-first into plaintiff's shop window, causing the damage claimed, besides considerably injuring itself and the cab. Evidence having been given, and counsel heard—chiefly on the point as to whether the driver was negligent in not being at the horse's head—his Honour (Judge Edge) nonsuited the plaintiff, with costs.

WAS SHE ILL OR NOT?—A rather strange case came before Judge Edge on the same day as he decided the case in which Messrs. Stone & Son were concerned. Dr. Bothwell, of Topham, was the medical attendant of Colonel Brockman, of the Elms; and he alleged that on dates between March, 1885, and March, 1888, he prescribed two or three sleeping-draughts for Miss Brockman. For these and other professional services a claim of 26*s.* was made, which Colonel Brockman disputed, alleging that it was Mrs. Brockman whom Dr. Bothwell attended, she then being ill—in fact, dying. It was further stated for the defence that beyond the sleeping-draughts which Miss Brockman had asked the plaintiff to send her, and the amount of which had been paid into court, the young lady had never consulted the doctor in any way. She admitted taking some of the medicine he sent her in March, 1886, but she never requested him to send it, nor did she require it; as a matter of fact, there was nothing the matter with her. Judge Edge, in the course of the evidence, endeavoured to get defendant to arrange matters with the plaintiff, it having transpired that Miss Brockman was ill, and the nature of the illness was privately communicated to defendant's counsel by the doctor. Ultimately the case was decided against the colonel with costs, the doctor saying that he had brought the matter into court more to defend his professional and personal reputation than for the amount of the debt.

LEICESTER.

RAILWAY RATES.—The Leicester and Leicestershire Chemists' Association have called a meeting of chemists and druggists for Friday evening, March 15, to consider the proposed Railway Rates Bill. This is an example which chemists of other large towns should follow.

LIVERPOOL.

MR. JAMES WOOD, 118 Northbrook Street, Liverpool, assistant-analyst to Messrs. Macfie & Sons, sugar-refiners, and formerly laboratory-assistant to Messrs Symes & Co., Hardman Street, has been awarded a bronze medal at the Photographic Exhibition, Birmingham, for his new print and plate washer and adjustable rack.

PHARMACEUTICAL SOCIETY LOSING MEMBERS.—Mr. Barton, of Edge Lane, has seceded from the Society. Mr. Coupland and Mr. Foulkes, who have recently died, were both members—making a loss of three in as many months. Just now the expenditure of the Council requires an increase rather than a falling-off in its roll of supporters.

COCOANUT OIL.—It is not generally known amongst pharmacists that Liverpool presses and refines the greater part of the fine cocoanut oil used in England and on the Continent. Dried cocoanuts arrive here in cargoes of 600 or 700 tons from the South Sea Islands, and more recently from Java and Singapore, and are taken mostly by one firm. Smith's cocoanut oil is quoted as the standard for quality and price

in the Liverpool, London, and Continental markets. The pressed cake is ground into meal, and is sold as a nutritious cattle-food.

CHEMISTS' ASSISTANTS' SOCIETY.—The first ordinary meeting was held at the Young Men's Christian Association rooms on Tuesday, March 12, Mr. Thornton presiding. There was a good attendance, forty members being present, including fourteen who had joined since the opening meeting. Suitable rooms have not yet been found, but a meeting will be held in a fortnight, for which four short papers have been promised. This augurs well for the success of the undertaking, especially if the energy now displayed is well sustained.

MR. JUSTICE CHARLES, in charging the grand jury on March 11 at St. George's Hall, went into details at some length with regard to the case in which Parton is charged with the murder of Mr. Fletcher, at Manchester. He said undoubtedly on February 19 the prisoner possessed himself of a quantity of chloral, and without doubt there was a case of wilful murder against him. There were other charges, not of murder, but of administering drugs with intent to rob. With regard to these the same remarks applied as to finding a true bill. The jury found accordingly on both counts. Whilst Mr. Bromley exercised every care as to selling chloral hydrate, he was evidently unprepared for the theft of it in bulk. The case should serve as a warning to chemists generally.

LIVERPOOL CHEMISTS' ASSOCIATION ANNUAL DINNER.—This festival was held on Thursday evening at the Royal Restaurant, African Chambers, Old Hall Street. Mr. A. H. Samuel, F.C.S., the President of the Association, was in the chair, and the company numbered over eighty, including Messrs. Tyrer and Mason, London, and Gwilym Evans, Llanelli. Dr. Symes and Mr. Parkinson officiated as vice-chairmen. After an excellent dinner a long programme of speeches, songs, music, and recitations was placed before the assembly. The chairman, in proposing "The Liverpool Chemists' Association," said it was one of the oldest scientific societies in Liverpool. They were proud of the work which had been done. By combination they could benefit the trade effectually in a commercial sense. He urged chemists to meet competition by selling proprietary articles low. They should, where possible, manufacture their own preparations. Dispensing could not be done by machinery, and the public was still willing to pay for skill and knowledge in this direction. Mr. J. S. Ward, in responding, said they ought to be politically influential. We have a go-ahead council in London spending money lavishly—some would say recklessly—on front and back premises. This concerned all chemists, and this and similar associations should consider it. Mr. T. F. Abraham submitted the next toast, "The Pharmaceutical Society." It might be a moot point, he said, whether, notwithstanding our universal suffrage, councils represent accurately our views and aspirations; but, if not, that is the fault of members. If they send honest men they may be sure their interests would not suffer, for they sometimes see facts which we cannot see. Dr. Symes responded, and said if he had sometimes thought and acted independently, and had thus occasionally come into collision with some of his colleagues, the discussions had always been friendly. He regretted that the Society consisted of only the smaller part of the trade, and hoped the time would come when it would be rare for chemists not to belong to it; but before that time much reform was required. They were drifting to suppose everything was to be done by education, whereas they wanted also to show that the interests of the trade were more considered—to inspire individuals to rally round the Society. Amongst other toasts was "The Medical Profession," proposed by Mr. J. Hocken and responded to by Dr. Bailey. "The Wholesale Trade" was submitted by Mr. J. Woodcock, and in a crisp speech Mr. W. P. Evans responded. The usual compliments were paid to the officers and those who had worked to ensure the success of the excellent reunion.

MANCHESTER.

LOCAL OPINIONS ON THE PHARMACY BILL.—In the absence of any expression of opinion from our local Pharmaceutical Association, I thought it would be interesting, writes a Man-

chester correspondent, to obtain the views of some Manchester pharmacists on the subject of the Pharmacy Bill now before Parliament. My efforts in this direction, however, have met with very partial success. Some of those who were invited to shed the light of their opinions on the subject candidly confessed that they had no opinions—in some cases, indeed, did not know anything about the provisions of the Bill; while those who had made up their minds on the subject expressed a disinclination to meddle with pharmaceutical politics. Mr. W. Wilkinson says he does not care to express any opinion on the proposed Bill. He is absolutely indifferent about the matter. It may do all the good some people imagine, but that remains to be seen. Mr. F. W. Bates expressed himself as "perfectly in favour of the curriculum scheme, but thought we have now an opportunity for adding to it the four clauses of THE CHEMIST AND DRUGGIST. There is no doubt, in his opinion, that if the trade could be persuaded to give a unanimous demand for such a Bill it would force the Pharmaceutical Council to attempt something sensible on their behalf. Would it not be a good plan, he asks, to send up a petition to the Council signed by those who are in favour of the clauses being added to the Pharmacy Bill of 1889?" Mr. Thomas C. E. Osborne says that "the time has come when we should determine to make a serious effort to pass a Bill through Parliament to amend the Pharmacy Act. The public should be still further protected from the risks they run in the distribution of poisons by unqualified persons. The schedule of poisons should be increased, and the sole right to dispense the prescriptions of medical men (whether they contain poisons or not) should be placed in the hands of duly qualified persons. A Bill drawn much upon the lines of that sketched in THE CHEMIST AND DRUGGIST of February 2 would, he thought, have the general support of the trade, and have a fair chance of passing into law. He suggests that a memorial should be presented to the Pharmaceutical Council, asking it to proceed with such a Bill, and, in the event of its refusal, to form an independent association for the purpose of promoting such a measure."

SHEFFIELD.

STUDENTS' NIGHT.—There was a good meeting of the Pharmaceutical and Chemical Society on Wednesday night, and the programme submitted was excellent. Mr. Charles D. Moffat read a lengthy and useful paper on "Filtration," which was full of hints; Mr. McLeod gave some hints to students, and "The Minor" was the topic of a discourse by Mr. Shaw.

YEOVIL.

NOT FOR HIS LANDLADY.—An inquest was held here on March 7 regarding the death of a traveller named Edsall, aged 59. The evidence showed that on Friday, March 1, he purchased a sixpenny packet of rat-poison from Mr. E. Hellier, chemist, and signed his name for it, saying he had been asked by his landlady to get it. This poison he swallowed, and was found dead in bed on the morning of March 6. Dr. Colmer proved that death was due to vermin-killer.

YORK.

MARRIAGE REJOICINGS.—The employes in the local establishment of Messrs. Raimés & Co., wholesale druggists, were entertained to dinner at the Old George, on Saturday, March 2, to celebrate the marriage of Mr. Richard Raimés, the senior partner of the firm. Mr. Scruton, the resident partner and manager, presided. A very pleasant evening was spent.

SCOTLAND.

ABERDEEN.

MR. JAMES WHYTE has disposed of his Rosemount Place business to Mr. Thomas Black, Belhaven, Dunbar.

ABERDEEN AND NORTH OF SCOTLAND SOCIETY OF CHEMISTS AND DRUGGISTS.—In continuation of the jubilee celebration the assistants and apprentices were invited to a

dance in the Music Hall Buildings on the evening of Tuesday, March 5. It was a great success; this being mainly due to the indefatigable exertions of Dr. Presslie and Mr. John Cruickshank and a few of the assistants. The company met at nine o'clock, and after an hour and a half's dancing they were addressed by Ex-Baillie Paterson, who in the course of his speech referred to the work which the Society had done during its existence, and the influence which it had upon local pharmacy. Dancing was then resumed, and kept up until an early hour. In the course of the evening various amusements were worked in to add variety to the entertainment, and, needless to say, the "inner man" was well looked after. The guests, in a letter addressed to the secretary (Mr. Alexander Strachan), have expressed their appreciation of and thanks for the evening's enjoyment.

BO'NESS.

FERGUS F. THOMSON, an unregistered chemist, of the Botanical Medical Hall, Bo'ness, was found dead in bed at his lodgings on Friday last, with an empty chloral bottle beside him (another report says belladonna). Before he took the fatal dose he wrote a very affectionate letter to a young lady. Thomson was a middle-aged man.

EDINBURGH.

THE Scottish Drug Depôt (Limited) are understood to have fixed upon 31 Dalry Road as the location of their western branch.

CLAIM ON A DRUGGIST'S ESTATE.—On Tuesday the case of Brown v. Brown's executor was settled in the Court of Session. The pursuer, Margaret Brown, residing at Toronto, sued the executor-dative of her late father, James Brown, druggist, Peterhead, for payment of 800*l.*, or 40*l.* annually during her lifetime. The pursuer is an illegitimate child, but the deceased Mr. Brown admitted her paternity, and recognised her as his daughter. When he died about a year ago he left over 1,000*l.* The action was taken out of court, the defender having tendered the pursuer 10*l.* annually.

GLASGOW.

GLASGOW CHEMISTS AND DRUGGISTS' ASSOCIATION (ASSISTANTS' SECTION).—An ordinary meeting of this Association was held on Thursday, March 7, when Mr. Wm. Bordie read a paper on "Some Peculiarities of Plant Life," in the course of which he touched upon many curious facts connected with the fecundity, persistent vitality, and malformations of vegetable organisms.

News.

THE Government of Victoria propose to enlarge the Melbourne University at a cost of 90,000*l.*

MR. J. HODGKIN (of Messrs. Howards & Son) presided at the musical and social evening of the Chemists' Assistants' Association on Thursday.

At the Chemical Society's meeting next week (Thursday) there will be a ballot for the election of fellows; and papers on "The Molecular Weights of Metals," by W. Ramsay, F.R.S., and on "Some Compounds of Tribenzyl Phosphine Oxide," by N. Collie.

CHLORODYNE was intentionally taken in excess by a young man, named Henry John Thornton, at South Shields on Wednesday, and he was found lying on a bed in a room in his parents' house foaming at the mouth. A doctor was sent for, but the man died before his arrival.

THE DIVISIONAL SECRETARIES appointed last week to represent the Pharmaceutical Society in London were invited to attend a conference at Bloomsbury Square on Wednesday, and fifty out of the fifty-six responded. The conference was highly successful, we understand, and the new officers now know exactly what they will be expected to do. The Benevolent Fund will have their first attention.

THE ANNUAL DINNER of the members of the Pharmaceutical Society and their friends will be held in the Freemasons' Tavern on Tuesday, May 14, the night before the annual meeting. The gentlemen who served as a committee last year were again appointed at the meeting on Wednesday, Mr. A. H. Mason, however, taking the place of Mr. Robinson.

UNQUALIFIED ASSISTANTS.—Mr. William Bowden, an unqualified assistant to Dr. Macnaughton, Deptford, was called in to attend the wife of a lighterman after her confinement, and he prescribed for her, but she died. At the coroner's inquest held on Wednesday Dr. Hawkesworth stated that death was due to the want of proper medical attendance. The jury returned a verdict that death was occasioned by the gross ignorance and negligence of William Bowden, acting as a medical man without a licence, who did feloniously kill the woman. Mr. Bowden was admitted to bail in 1,000*l.*

A SMALL scare has been caused by the publication in the *Times* of a letter calling attention to the fact that some green candles used for decorating a Christmas Tree "were coloured with arsenical green, to the extent that every eight candles would contain one grain of arsenious anhydride." The red candles were coloured with vermilion. The result was that the children attending the Christmas party suffered from symptoms of mineral-poisoning. It is about thirty years ago, we may add, since a pharmacist—was it Mr. John Robbins?—made a similar announcement regarding green candles.

MEDICAL ADVERTISING.—The Governor of Illinois has just decided a point of some importance to medical practitioners in that State. The State Board of Health having revoked the licence to practise of a physician on the ground that he had been guilty of unprofessional conduct in advertising his skill and success in the newspapers, he appealed to the Governor of the State, who has reversed the decision of the Board of Health, and decided that a physician should not be debarred from practice because he advertises what cures he has effected. It is said that the physician concerned in this instance spends 8,000*l.* per annum in advertising, and that he was financially aided in his appeal by some of the Illinois journals.

THE COMMITTEE ON THE IRISH PHARMACY ACTS.—The Supplementary Estimates passed last week included an item of 909*l.* as extra expenses incurred by the House of Lords chiefly in select committees, of which, it is said, there was an unusual number last year. The costs were distributed principally between witnesses and shorthand writers. The committees mentioned as having specially increased the expenditure were the Sweating Committee, the Committee on High Sheriffs, the Committee on Private Bill Legislation, and the Committee on the Irish Pharmacy Acts. Colonel Nolan said two of these committees seemed to him ridiculous committees—namely, those on High Sheriffs and the Pharmacy Acts. The gallant colonel was going to give reasons for his opinion, which would have been interesting, but he was checked by the chairman, who said it was out of order to discuss any special committee on the vote. Mr. Biggar thereupon remarked that he thought select committees of little value, as the evidence given before them consisted generally of the personal opinions of partisans.

GOODS MANUFACTURED ABOARD.—Mr. Howard Vincent, M.P., has introduced a Bill "for the defence of British and Irish industry." He proposes to prohibit the importation into the United Kingdom of all goods of foreign manufacture which do not bear, in a legible and conspicuous form, a definite indication of the country in which they were made or produced. If any such articles are imported, they will then be subject to forfeiture, and to be destroyed or otherwise disposed of as the Commissioners of Customs may direct. A special exemption from these provisions may, however, be granted by the published regulations of the Commissioners on the ground that the goods are incapable of being marked as is thus required. Another proposal of the Bill is that foreign goods, which do not bear a definite indication of the country in which they were made or produced, may not be exposed or offered for sale in the United Kingdom unless the purchaser be made aware by means of express notice on a board, card, label, ticket, or other document that they are of foreign production.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on March 6. Present: The President (Mr. James E. Brunner, M.A., who presided), the Vice-President (Mr. Draper), Messrs. Charles Evans, Wells, Grindley, Merrin, Doran, Hayes, Simpson, Allen, Tichborne, and Hodgson (treasurer).

APOTHECARIES FOR LUNATIC ASYLUMS.

A letter, dated February 18, was read from Mr. John Gilbert, L.P.S.I., of Ennis, stating that he was a candidate for the apothecaryship of the Ennis Lunatic Asylum, but that the Inspectors of Lunatic Asylums had held that he was ineligible for the office because he was not a licentiate of the Apothecaries' Hall. He had an interview with one of the inspectors, Dr. Hatchell, who adhered to that view, notwithstanding that he called his attention to the 34th section of the Pharmacy Act of 1875, viz.:—"Any person registered as a pharmaceutical chemist under this Act shall be qualified to be appointed to and to hold the office of apothecary in any district lunatic asylum or county gaol or prison in Ireland, but shall not be entitled to prescribe for patients."

Another letter from Mr. Gilbert, dated March 4, and addressed to the President, was also read. It forwarded a copy of rules and regulations for the management of asylums made by the Privy Council on February 23, 1874. It would appear, the writer stated, that the inspectors of lunatic asylums considered that as the apothecary of an asylum was required "to assist in the infirmary or in any other part of the institution where his services are needed, but shall not prescribe for patients except on urgent occasions or in the absence of the resident or visiting physician," a pharmaceutical chemist was not eligible. Of twelve gentlemen holding the office of apothecary in Irish asylums, Mr. Gilbert continued, eight are pharmaceutical chemists, and the late Mr. T. T. Seymour held that post in the Ennis Asylum from 1878 till his decease in 1881. As the appointment to fill the vacancy caused by the resignation of Mr. Seymour's successor would be made on the following Saturday, March 9, Mr. Gilbert trusted that the President would make a communication to Dublin Castle before that date, notifying that he was duly qualified to hold the office.

The PRESIDENT said that the inspectors of lunatic asylums had taken up an untenable attitude in this matter. Mr. Gilbert had called on him before he wrote his first letter, and he (the President) gave him a letter to Dr. Hatchell, in which he called attention to the 34th section of the Pharmacy Act. That section was perfectly clear, and no matter what opinion the inspectors might hold as to the advisability of having an apothecary instead of a pharmaceutical chemist, the regulations of the Privy Council made prior to the Pharmacy Act of 1875 could not override its provisions. He had been told by Mr. Gilbert that the local governors of the institution were in favour of appointing him. He had only his word for that; but he told him that if they should appoint him the inspectors of lunatic asylums at the Castle would have to confirm the appointment. This gentleman had been acting as the qualified manager of an establishment, the late proprietor of which had actually filled the post for which he was now declared to be ineligible. He had appealed to the Council, and it was their duty not to lose a moment in pressing upon both the local governors of the asylum in question and the inspectors of lunatic asylums that he was fully qualified by Act of Parliament to hold the position in question.

Mr. DORAN: Mr. Gilbert was with me for some years, and he is a thoroughly reliable and efficient dispenser, and I cannot understand on what principle they refuse to give him the appointment.

The PRESIDENT: They say that the duties of the office are such as to require an apothecary.

Mr. WELLS: There is more than one doctor connected with the asylum in question, and therefore only a remote probability that all will be away at the same time.

The PRESIDENT: The only thing we have before us is that our licentiates are qualified by law to hold these appointments.

Professor TICHBORNE: Has the gentleman to visit patients at night?

The PRESIDENT: No, that is not his duty. The regulations say that the "duty of the apothecary, if resident, shall be to devote his services in the asylum to assisting the medical officers; and if non-resident he shall attend daily at the asylum before two o'clock, or whenever required by the resident medical superintendent; he shall compound all prescriptions, enter them in a book, and inscribe directions on each parcel, and take care that all medicines not used or counter-ordered shall be returned to him; he shall assist in the infirmary or in any other part of the asylum where his services are needed; but he shall not prescribe for patients except on urgent occasions, or in the absence of the resident or visiting physician." That regulation was made by the Privy Council the year before section 34 of the Pharmacy Act 1875 became law, and the Act of Parliament quite overrides it.

Mr. HAYES moved the following resolution:—

That communications be addressed to the Inspectors of Lunacy and also to the Governors of the Ennis Lunatic Asylum, calling their attention to the Pharmacy Act, in which it is enacted that a licentiate of the Pharmaceutical Society of Ireland shall be qualified to hold the office of apothecary in any district lunatic asylum or county gaol or prison in Ireland.

Mr. CHARLES EVANS seconded the above, which was carried unanimously.

DONATIONS

were announced from the Pharmacy Board of Victoria of a copy of their Register for 1888; and from the American Pharmaceutical Association of a copy of their Proceedings for 1888.

It was ordered that the donations be acknowledged with thanks.

A MATTER OF REPORTING.

Professor TICHBORNE moved, pursuant to notice, the following resolution:—

That it is the opinion of the Council that no important part of the proceedings of the Society shall be omitted from the official report except by an order of the Council, which has been carried by a majority of the said Council.

He brought this motion forward in connection with a transaction that took place relating to the January meeting of the Council; but he did so with no feeling of disrespect to the President, for they all admired his general cleverness and all that sort of thing, but really as a matter of principle. The question involved was whether one member of the Council was to rule the Council, and suppress any portion of their proceedings. There were two reasons why he protested against such a false position. One was that a suppression of the kind prevented the members of the Society generally from knowing what the action of the members of the Council was in relation to the matter excluded. It prevented the members generally from knowing what took place at the Council. That was radically wrong. Another objection was that it instituted a one-man policy. However clever that one man might be his opinion was not the opinion of the Society. The action of the Council was supposed to represent the collective wisdom of the Society. But if a one-man policy were put before the public it would not represent either the collective wisdom of the Council or any diversities of opinion that might occur in it. Personally he had been on one or two occasions the victim of these suppressions; but his feeling was that, if he was mistaken in any of his views, his mistake should appear before the members. Let them all be judged according to the merits of their views. He dared say he had been very often wrong, and so had others. He did not speak as an inexperienced member. He sat under the presidency of Sir Dominic Corrigan for a good many years, and he was afterwards President himself, and they never found that any suppression of the proceedings of the Council was necessary. ("Question.") No doubt a resolution was passed that law matters should be only briefly noticed. Those were the only things in either Sir Dominic Corrigan's or his own experience as President of the Association in which there was any suppression except on two

occasions, on one of which he modified a word on his own responsibility, not being able to consult the speaker, who was afterwards very much obliged to him for it; and in that case he did not alter the sense of what took place. The particular matter to which his present motion referred was this:—A notice of motion, which was evidently carefully considered, was put by the President on the paper, to the effect that from February 1 of the present year the supply of the *Pharmaceutical Journal* to the members of the Society be discontinued. Thinking that it would pass, the President also drafted a letter expressing thanks to the President and Council of the Pharmaceutical Society of England for their kindness; and he further put a notice on the *agenda* paper that a committee should be appointed to consider the subject of the reporting of the proceedings of the Society. When the notices came on at the January meeting of the Council there was considerable discussion on that for the discontinuance of the *Journal*, and no objection was made to it until he (Professor Tichborne) got up and objected. He expressed doubt as to whether any saving would be effected by the proposal, and pointed out that the Council had undertaken in October last to supply the members with the *Pharmaceutical Journal* for twelve months, and were therefore under an obligation to do so. On that legal ground the President withdrew his motion. Now he (Professor Tichborne) wanted to know, and asked the President to explain, why he suppressed the whole of that discussion from the report. It was a subject that concerned all the members, and next to the Pharmaceutical Bill had been for years the most specially interesting to them. The course taken was a great want of respect and a bad compliment to the intelligence of the other members of the Council, and he (Professor Tichborne) individually protested against it. Of course, if the Council liked to have their proceedings regulated in such a way he had no objection. He therefore moved his resolution. Of course they did not want to make petty objections about the omission of small matters; but when there was an important subject the members were entitled to have it reported. He might as well tell them that this was a subject of great interest to the country members. He had got a letter from Dr. Whittle which he would read—

The PRESIDENT: I think the place for a member of the Council to express his opinion in is at the council-table.

Professor TICHBORNE: I am not going to read his opinions: I only want to point out that the subject has excited considerable interest.

The PRESIDENT: Really, Mr. Tichborne, I have already ruled that the letter is not to be read.

Professor TICHBORNE: I was not going to read it. I only wanted to quote so much as would show the interest the writer takes in the subject.

Mr. MERRIN seconded the resolution of Professor Tichborne. He thought the members should be made aware of important discussions, especially such as that relating to the supply of the *Journal*.

THE PRESIDENT DEFENDED.

Mr. HAYES said it was a great pity that this matter had been brought forward, and he feared that it was not done in a good spirit towards the President. (Hear.) They all had most unqualified confidence in Mr. Brunker; and feeling that he was loyal to the Society and to its members, he (Mr. Hayes) would do nothing that would bring any discredit either on him or his office, or on the Society. (Hear.)

Professor TICHBORNE: I rise to order. That is not the question raised. The question raised is—Is it desirable that the President shall have the power of suppressing a part of the proceedings? (Hear.)

The PRESIDENT ruled that Mr. Hayes was speaking to the question.

Mr. HAYES said they had the fullest confidence that Mr. Brunker would do everything that was right in connection with the reports of their proceedings that were to be laid before the Society and the public. Many things were discussed there that it would be most injurious to the interests of the Society to lay before the public. They might be misinterpreted, and the publication of them might cause an amount of mischief that could not afterwards be remedied. That was so in the case of the Bill that was last year before them, and also in the case of the special subject to which Professor Tichborne alluded. Professor Tichborne suggested

—and it was considered to be a good suggestion—that the Council should not break faith with the members who had paid their subscriptions, but should continue to supply them with the *Pharmaceutical Journal* to the end of the year. It was on that ground, and on that alone, that the withdrawal of the notice from the members without a division was conceded. He (Mr. Hayes) thought that the President was quite right in suppressing that discussion for this reason—that they did not want to show their friends in England, who had been good friends to them, that they contemplated treating them in any way that would show want of appreciation of what they had done for them; and also because they found that the time was not exactly ripe for carrying out what was contemplated, and that it would be much better to have the matter thoroughly ventilated next October. Therefore he thought that the President acted with great discretion in withdrawing the subject from publication in the *Journal*. He thought that every member of the Council, or at all events a large majority of them—he should say eighteen out of the twenty or twenty-one—would have the most perfect confidence that the President would do nothing in any way discreditable to himself, his office, or the Society. (Hear, hear.)

Mr. GRINDLEY, in supporting Mr. Hayes, said he desired to call attention to the fact that up to 1881 the reports of the proceedings of the Council and Society were very meagre. At the annual meeting that year, Professor Tichborne being President, a resolution was brought forward that a paid reporter should be appointed in order that the members of the Society might have more information respecting the proceedings of the Council than they had previously had. That resolution was carried, with an addendum proposed by Professor Tichborne, that all the reports that should be made by the reporter to be appointed should be subject to revision by the President. The matter was brought up at the next meeting of the Council, Professor Tichborne being again in the chair, and the motion was then passed, with the addendum that all the reports should be supervised by the President. Since that time and during Professor Tichborne's tenure of the chair, he did exactly as had been done since he left the chair. The reports were sent to him for correction or supervision, and they were supervised by him; and he (Mr. Grindley) was quite sure that anything that was derogatory or dangerous to the Society, or that occurred out of course in the heat of debate, was omitted from the reports. The rule was also acted on during the presidency of Mr. Allen; and he (Mr. Grindley) was quite sure that he would be endorsed by all the members present when he said that their worthy President who filled the chair now had only acted as his predecessors had done. Therefore, he (Mr. Grindley) had great pleasure in supporting Mr. Hayes in this matter.

Mr. ALLEN said that personally he looked on this motion—whether intentionally or unintentionally so—as nothing but an insult to the President. He could not see that he had done anything that he should not have done. He had corrected the report in question in the way that would have been done if it had been put to the meeting. When anything private came before that Council in committee it should not be published. But he was sorry to say that at a general committee meeting there they went into a notice of motion of Professor Tichborne in relation to the Pharmacy Bill, and the matter discussed was supposed to remain secret; but that very evening in London the information—where it came from he was not prepared to say, but suspicion pointed in a certain direction—the information that should have remained private—

GETTING WARM.

Professor TICHBORNE: I rise to order. If the gentleman refers to me I say the statement is unfounded, and an untruth.

Mr. ALLEN: I do not know where it came from.

Professor TICHBORNE: You said it pointed—

Mr. ALLEN: To some member of the Council. I am not able to indicate.

Professor TICHBORNE: A member of the Council has no right to make insinuations.

Mr. ALLEN: Professor Tichborne will be able to reply.

Professor TICHBORNE: I call on the President to rule that Mr. Allen is out of order. He has made an insinuation

against me and against the Council. I deny it emphatically. It is not the truth.

Mr. ALLEN: I have not mentioned anyone's name.

Professor TICHBORNE: Well, sir, it was next door to it; and I call on you to withdraw it as regards its application to me.

Mr. ALLEN: If it refers to you I withdraw it; but I say it went through some member of the Council—I am not prepared to say whom.

Professor TICHBORNE: Is it withdrawn as regards me?

Mr. ALLEN: I have great pleasure in withdrawing it.

Mr. WELLS said he could not give a silent vote in this matter. He had been always anxious that the reports should be as long as possible, in order that they should give as much information as possible to the licentiates. The reports were now very much improved in every way from what they were. Sometimes, perhaps, some of them made speeches that they would like to see more fully reported than they were; but if everything that was said by members were to be reported fully, perhaps they would want the whole *Journal* to themselves.

MR. BRUNKER DEFENDS HIMSELF.

The PRESIDENT said that before putting the motion he thought a few words were called for from him. Notice of this motion was given for the last meeting of the Council. Unfortunately he was obliged to be absent on that occasion, and he wrote to Mr. Tichborne asking that, as the motion amounted to a vote of censure on him, he would postpone it until he could be present. Mr. Tichborne, by implication, accepted that interpretation, that the motion was intended as a vote of censure on him, and had still further emphasised it by the remarks that he had made in support of the motion. As it appeared on the notice-paper it was very much to the same purport as a notice given for the last annual meeting, and which at a large meeting of the Society did not succeed in getting a seconder. The motion censured what was done by Mr. Tichborne when he was President, by him (Mr. Brunker) when he was formerly President, and by Mr. Allen, such being the course he had always adopted in looking over the reports supplied to him by Mr. Macartney. Nothing of importance was omitted from them. The alterations that he had made were few and far between; and until Mr. Tichborne's remarks to-day he was at a loss to know what was the occasion which gave rise to the present motion. At the January meeting the second or third speaker upon his motion was Mr. Tichborne, who raised the legal point that the members having paid their subscriptions for the year were entitled to get the *Pharmaceutical Journal*. That being a point which upset the whole principle of the proposition which he intended to make, he withdrew his motion. But no report of it was made by Mr. Macartney, and therefore he (President) struck out nothing. In the copy that he got from Mr. Macartney there was not the slightest reference to the motion. Anyone who looked at the reports in the two journals would see that they were the same, except that occasionally THE CHEMIST AND DRUGGIST did not afford them quite so much space as the *Pharmaceutical Journal*. Under the circumstances he (President) could only look on this motion as a vote of personal censure on himself. If their President was not to be entrusted with the duty of revising the reports and excluding from them any matter that might be injurious to the Society, he was not worthy to sit in the chair; and if they could not have a President to whom they could entrust that duty the sooner the Council shut up the better.

FURTHER EXPLANATION.

Mr. MACARTNEY, the reporter to the Council, explained that on the withdrawal of the motion he asked the President whether the discussion on it was to be reported, and the President said that it was not. Consequently he (Mr. Macartney) did not transcribe the notes he had taken of it.

Professor TICHBORNE, in reply, said he had nothing to add. As regarded the present motion being a vote of censure on the President, he (Professor Tichborne) could not see how his having acceded to the request for a postponement was an admission of that.

The PRESIDENT: Excuse me, I said nothing of the sort. You have the wrong end of it. I wrote to you saying that I

regarded the notice as a vote of censure; you never repudiated that construction, and therefore accepted it.

Professor TICHBORNE said that no one had a greater respect for Mr. Brunker than he had; but he often differed very much from gentlemen for whom he had a great respect. Therefore he must deny that he had brought forward the present motion out of personal disrespect to the President. There was a clear distinction between important discussions at the Council and proceedings in committee which should not be reported.

A VOTE OF CONFIDENCE.

The PRESIDENT then put the motion, which was negatived by 8 votes to 3. The Council divided as follows:—For the motion: Professor Tichborne, Mr. Merrin, and Mr. Simpson. Against it: Messrs. Doran, Charles Evans, Hayes, the Vice-President, Allen, the President, Hodgson, and Wells.

The PRESIDENT: Gentlemen, I am very much obliged to you for the confidence you have shown in me by rejecting this resolution. I must say that I considered it nothing else than a vote of want of confidence had the motion been supported by any considerable minority. I should have had—as has been said in another place—to consider my position. I never committed any breach of confidence yet, and as long as I remain in this chair I never shall. (Hear, hear.)

NEW PREMISES.

Mr. HODGSON moved pursuant to notice that the question of providing premises for the Society be taken into consideration. As they were aware, notice had been given of surrender at the end of six months of the premises in which they at present were; and the point on which he now asked them to express an opinion was, would they take a house again by the year and go to the expense again of preparing it for their purposes, or look out for a house which would be suitable for their purposes and purchase it?

Mr. HAYES said they were scarcely in a position to lay out much money.

The VICE-PRESIDENT observed that they were at present under a rent of 50% a year.

Professor TICHBORNE said the best course was to refer the subject to a small committee.

On the motion of Mr. Wells, seconded by Mr. Grindley, a committee, consisting of the President, the Vice-President, Mr. Hodgson, and Mr. Hayes, was appointed to look out for a suitable house, and report to the next meeting of the Council.

THE PHARMACY BILL.

Mr. HAYES moved that the question of the introduction of a Pharmacy Bill in the present session of Parliament be taken into consideration. He believed that if they went forward with a Bill this year they would not be alone.

The PRESIDENT remarked that the great thing would be to start early in the session.

In reply to Professor Tichborne,

The REGISTRAR stated that the total cost of last year's Bill was 155*l*.

The matter was referred to a committee.

Reports from the Examinations Improvement Committee and the Law Committee were considered and adopted.

On the motion of the Treasurer, Mr. Hodgson, seconded by Mr. Beggs, Dr. Patrick Walsh, L.P.S.I., of the Medical Hall, Mitchelstown, was admitted a member of the Society.

Some financial business having been disposed of,

The Council adjourned.

A GLOOMY account of the life of medical men in the Australian Colonies is given to the world by the morning papers this week. What with competition and the "clubs," the practice of medicine is reduced to a mere subsistence; and the Chief Secretary for Victoria is stated to have forbidden the police to prosecute unregistered medical practitioners, saying that the medical men, or some other person, should take up such cases. There is no "society" whatever, and that is a thing which the ultra-professional medical man cannot exist without. Altogether things seem to be in a bad way; but, we may ask, why do so many Colonials come here for a qualification to enter such a miserable calling?

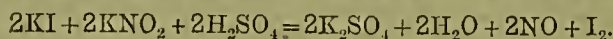
Pharmaceutical Society of Great Britain.

EVENING MEETINGS.

THERE was rather a poor meeting at Bloomsbury Square on Wednesday night. The bulk of the audience of forty, or thereabouts, consisted of students, but there was a fair sprinkling of senior members. Mr. Carteighe presided. The programme was short, and the first item on it was

A METHOD FOR THE ESTIMATION OF NITRITES,

communicated by Professor Dunstan and Mr. T. S. Dymond. Professor Dunstan gave this in the form of a lecture and demonstration, and he was assisted in the latter part by his colleague. There are several ways for estimating nitrites, all being more or less faulty. The faults were fully explained by the authors. It will suffice to state here that regarding the official methods for estimating *spt. æther. nit.*, Eykman's gives too low results, and Allen's, by means of the nitrometer, requires correction for the vapour-pressure of alcohol, water, and iodine, as well as for the amount of nitrous oxide which is dissolved by the liquids. The correction cannot be accurately determined, and we do not know precisely what the solubility of nitrous oxide in spirit or water is. The authors propose, following a method which has previously been attempted, to estimate the nitrite by determining with sodium thiosulphate the amount of iodine set free in the reaction with potassium iodide, as for instance in the following:—



The trouble with this reaction is that if it is conducted in the presence of air the NO is raised to a higher nitrogen oxide, and liberates more iodine. The authors obviate this in the following manner:—A strong 100 c.c. flask is about half filled with an acid solution of potassium iodide; a perforated cork, fitted with a six-inch piece of glass tubing, is inserted; at the end of the tube a small cylindrical funnel is attached by means of a piece of rubber tubing. The contents of the flask are now brought to the boil, and after a few seconds of brisk boiling the whole of the air is expelled from the flask. While ebullition is going on the flask is closed with a burette clip fastened on the india rubber tubing. The contents are now allowed to cool; then the nitrite, *e.g.*, *spt. æther. nit.*, is introduced carefully, and washed down with water. Care must be taken that no air enters. In a few seconds the reaction is complete, and the standardised thio-sulphate is run in cautiously, any excess being returned to the burette. The authors submitted results obtained by working with Allen's method and this one, which showed that the latter is practically perfect for the inorganic and organic nitrites, and they recommend it as an alternative process to those recognised in the Pharmacopœia.

The President, in opening the discussion, said that the method was a very simple one, which ordinary country pharmacists could use, but Mr. John Moss could not agree with this remark. He thought there were objections to the process, such as returning the thio-sulphate solution. It was certainly a method which required very great care, and the apparatus was not simple. Professor Atfield admired the ingenuity of the means for getting rid of the air, but was somewhat indefinite in his opinion as to the merits of the method, and put in a good word for the Pharmacopœial methods. Mr. Dymond pointed out that the flask and its connections were all that were required. The point of the paper was, he said, that in the methods hitherto used we have not been sure that we have got all the nitrous oxide; some of it dissolved in the water, but how much we don't know. Professor Atfield, again rising, said that we do not require for pharmaceutical purposes to go to the second place of decimals, as the authors had done, and Professor Dunstan and he had a short talk on this point. Mr. MacEwan thought the authors made too much of the solubility of the nitrous oxide. Very little of it could be dissolved in Allen's method, as only 15 c.c. of liquid was affected by it. The principle of the method now recommended had been advocated by Mr. D. B. Dott five or six years ago. He had obviated the air difficulty by conducting the reaction in an atmosphere of carbonic

acid gas, and had obtained fairly constant, though rough, results. Professor Dunstan replied to the speakers.

The Chairman then called upon Mr. William Martindale to read a few notes on

EGYPTIAN OPIUM AND SOME OTHER DRUGS OF THE CAIRO BAZAARS.

Mr. Martindale lately visited the Land of the Nile for the benefit of his health—with the best results, we were pleased to note. While in Cairo he visited the native bazaars, and there purchased the drugs and curiosities which were the subject of his paper. Egyptian opium is made near Akhmin and Ashmunein, and is found in the bazaars in flat pieces covered with poppy leaves. The first-named variety is the better, and contains 7.24 per cent. of morphine; the second is poor, only yielding 0.6 per cent. of the alkaloid. Mr. Martindale showed other commercial samples of Egyptian opium, and described the districts where it is made. The poppy capsules, with their double circular incision, were also shown, and it was stated that the uncut capsules, with their stalks, are sold in the bazaars in bundles of about a dozen. Egyptian soap-root, used for washing, was next exhibited. It comes from Syria, and is probably of leguminous origin. Next we had for inspection a few pieces of the root of capparad sodada, used as a tooth-brush—the Japanese, by the way, use another root for the same purpose. Then came some incense sticks and perfumed fumigating pastils—soap-bark, which is the bark of liquidamber styrax, from which the balsam has been pressed out. There were a few other curiosities, such as the fruit of a zygophyllum, used for ophthalmia; acacia seeds, for dyeing; henna, and the pods of albezzia lebbek, a tree which Martius says yields gum Senegal, but Mr. Martindale could find none. He learnt that neither senna nor gum acacia comes through Cairo now, and he informed the meeting that there is no restriction on the practice of pharmacy in Egypt, and there are French, German, Greek, and Syrian pharmacists in the cities, who apparently have any English dispensing to do which is to be done.

Mr. Holmes supplemented the notes by a few remarks on the specimens. The opium received most of his attention. "Pharmacographia" states in one place that some Egyptian opium comes to this country, and in another that all the opium made in Egypt is consumed there. Mr. Martindale has helped to clear up this contradiction, and Mr. Wink has added some valuable information. It seems that all the opium made from Egyptian-grown poppies never leaves the country, and none has come to London for many years. The "Egyptian" opium which we meet with here is made in Egypt from opium sent there from London and Persia. It is a bad imitation of Malatia opium, a soft shipping opium containing about 8–10 per cent. of morphine, remarkably smooth, and of fine odour. The Egyptian imitation, in which ground figs are prominent, contains something under 5 per cent. of morphine, and is distinctly bad in grain and odour. Mr. Holmes also spoke of a specimen of screw-pine water, received from Mr. Prebble, of Bombay, contained in a quaintly-shaped flask. There was on the table an exceedingly fine specimen of

CASCARA SAGRADA,

which, the curator explained, he had picked from a bale belonging to Messrs. John Moss & Co. The specimen consisted of large bold quills, some thick (stem bark) and others thin (branch bark). It was noticeable that the colour of the inner bark varied, the characteristic coffee brown being present in some and absent in others. It was explained that the colour is entirely due to the drying, so that it cannot be relied upon as a distinguishing feature. The bark was that known as "Oregon"; and from a letter of Mr. Hartford, New York, which was read by Mr. Holmes, it would seem that all cascara sagrada comes from Oregon—that from the south passing through California, and that from Washington Territory going by New York. Mr. Hartford sent two samples of bark, one the ordinary kind in thin pieces shaved off from the tree while the sap is flowing, the other removed in winter, after steaming, also by shaving. Bark with the silvery grey appearance outside is old, and that which does not have this mossy character is young bark—both are genuine cascara sagrada. He corroborated gene-

rally the conclusion arrived at by Mr. Moss a month ago, and emphasised the precaution that cascara sagrada should be kept two years. He estimated that 300,000 lbs. of bark will be required for the next twelve months, that the new bark will only be ready in August-September, and that it will only be obtained from the ranches after higher payments to the owners; so that there is no likelihood of the price going down. It will rather tend upwards, and the greater care taken in collecting the bark will help to keep up the supply. This statement was listened to with much interest, and it formed the concluding part of the programme.

Mr. William Gilmour presided at a meeting held at Edinburgh on Wednesday night. The first paper read was on

COMPOUND LIQUORICE POWDER: AN IMPROVED FORMULA.

By J. H. Fisher.

It had been suggested to the author by a medical man that cream of tartar might replace sugar in the official formula, and he had tried this, and subsequently adopted the following modification:—

	Parts
Senna	2
Liquorice	2
Fennel	1
Sulphur	1
Cream of tartar	4
Sugar	2

The result is an agreeable and reliable preparation. It has been in use in the author's district for six years, and had gained popular favour. Its advantages are:—(1) A more agreeable taste; (2) it is more miscible in water; (3) is diuretic and refrigerant; (4) the cream of tartar corrects the griping of the senna, and obviates the objectionable characteristics of sulphur; and (5) it is a more reliable and powerful aperient. It is noticeable regarding this latter point that Christison states that cream of tartar increases the aperient effect of sulphur. The author considered that his formula is better than Dr. Oxley's modification (*THE CHEMIST AND DRUGGIST*, December 4, 1886, p. 735), in which anise and ginger replace the fennel; and he thought that, following Attfield's saccharin formula, the sugar could advantageously be replaced by its own weight of cream of tartar and 9 grains of saccharin, leaving the dose as it is in the *Pharmacopœia*.

In the discussion which followed Mr. J. B. Stephenson said that the proposal altered the nature of the formula entirely—it was, in fact, a new powder rather than an improvement of the old. The cream of tartar had a different effect from the present ingredients of the powder. Mr. Adam Gibson's opinion was more favourable. He had made a powder of the same kind ten years ago, and had found it good. Mr. Peter Boa had similar experience; he had made the powder for years, and Mr. George Lunan, who next spoke, had made the powder without sugar with good results. Mr. Charles Arthur thought the cream of tartar was not suitable for children on account of lime impurity. He was also of opinion that the powder would settle too quickly on mixing, and this was rather an objection. Mr. Rutherford Hill then put in a word in defence of the suggestion, and the author, in replying, maintained that Mr. Arthur's objections were not valid.

The next paper read was on

SUSPENDING BISMUTH SUBNITRATE IN MIXTURES.

By Samuel Lawrence.

The suspending agents employed were mucilage of acacia, mucilage of tragacanth, compound powder of tragacanth, glycerine, and syrup.

1. Mucilage of acacia yields a very unsatisfactory mixture. It has been stated that, for proper suspension, each part of bismuth subnitrate requires three parts of this mucilage, but the author found that, even if it be used in a larger proportion, no better result is obtained, the bismuth and mucilage, very soon after the mixture has been dispensed, settling down at the bottom of the bottle as a glutinous, indiffusible mass, which no amount of shaking can again diffuse through the mixture.

2. Mucilage of tragacanth is more viscous than acacia mucilage, contains a relatively smaller amount of solid

matter, and is therefore more suitable, although yielding a mixture far from perfection. Four parts of it to one of bismuth subnitrate give the best results. In this proportion the mixture when dispensed appears all right, but in a day or two afterwards the bismuth and tragacanth will be found to have run into small knots, which, when shaken up, subside so quickly that the patient cannot possibly measure out fixed portions of the mixture containing equal doses of bismuth. The bismuth and tragacanth do not settle at the bottom of the bottle as a gluey, indiffusible mass, as has often been stated. If a little glycerine be added to the mixture, it will be found on shaking up that separation takes place more slowly, an apparent advantage for the patient. A correspondent of the *National Druggist* has recently recommended this addition to mixtures in which bismuth is suspended in mucilage of acacia or tragacanth; with tragacanth this addition is an improvement, but with acacia it does not prevent the bismuth and acacia settling down as a glutinous, indiffusible mass.

3. Compound powder of tragacanth is preferable to mucilage of tragacanth, as the presence of sugar in it lessens the tendency of the bismuth and tragacanth to run into knots, while the starch being insoluble in water renders the sediment denser, and more easily shaken up.

Squire states that "for suspending heavy insoluble powders in liquids, compound powder of tragacanth equal to the weight of the powder itself may be used." The author obtained the best results by using only one-fourth of compound powder of tragacanth—if a large quantity be employed, the mixture is too thick. Bismuth subnitrate, 3j.; compound powder of tragacanth, 3j.; and water to 3j., solidify almost immediately after being mixed together.

4. Glycerine may perhaps be looked upon as the most suitable agent, in the proportion of four parts to one of bismuth subnitrate. The bismuth should first be rubbed in a mortar with its own weight of water before adding the glycerine. The glycerine thoroughly diffuses the bismuth after the bottle has been well shaken, and it remains so sufficiently long to admit of portions containing equal doses of bismuth being poured out. The author claimed the following advantages for glycerine:—

(a) Tinctures and spirituous preparations can be added without affecting to any extent its suspending properties.

(b) Large quantities of bismuth can be dispensed, say 3j. or 3iss. in each 3j. of mixture, without its being rendered objectionably thick.

(c) From a medicinal point of view, glycerine is less objectionable in some forms of stomach disorders than acacia and tragacanth.

5. Syrup in the same proportion as with glycerine gave good results. Its suspending power is, however, slightly less than that of glycerine. The author, in concluding, called attention to the *Pharmacopœia* dose of bismuth, which he considered too small.

Mr. John Nesbit, in opening the discussion, said that this was a practical paper on an interesting subject. Glycerine was good, no doubt, but the question was more for physicians than pharmacists. It might be objectionable if the bismuth was prescribed for diarrhoea. He had found that washing the bismuth made it mix better with gum. Mr. Boa had noticed different results with different samples of acacia. Then commercial samples of bismuth varied. The crystalline variety, for example, was acid, and went wrong more quickly than smoother sorts. Mr. Fisher gave his support to the suggestion, and Mr. Gibson remarked that he had experienced the difficulty: it was due to double decomposition, he thought, and he added that it was best to dispense bismuth salts with water only. Mr. Duncan suggested that an insoluble gummate was formed, which was difficult to diffuse. Mr. Lunan had noticed that different bismuth salts required different suspenders. He doubted the value of glycerine. Mr. McPherson said he used as little gum as possible, and the Chairman, in closing the discussion, said that the less suspending agent used with bismuth the better; the paper had ventilated the subject, and he thought it would do good.

The next paper read was on

MISSISQUOI WATER.

By Thomas Maben, F.C.S.

Some half-dozen years ago there had been a demand in the author's district for Missisquoi water. The patients who

used it were two females suffering from cancer, and both professed to be benefited by the water; but they died. He had thus been left with a quantity on his hands, and the dozen or so of bottles had stood on his shelves till a query in the columns of *THE CHEMIST AND DRUGGIST* as to the composition of the water had recalled it to his memory. A short account was given of the Missisquoi-spring water, and quotations were made from the pamphlet published to extol its virtues, in which it is said that "Nature has a varied and occult laboratory of her own, and she has doubtless put into the water of the Missisquoi spring just such curative properties, and in just such proportions, as are necessary to effect the cures intended, irrespective of its apparent chemical preparation," and it was with the object of getting at this wonderful secret that the author undertook an analysis of the water. In addition to its specific action in cancer the water is said to cure scrofula, catarrh, eczema, dropsy, gravel, Bright's disease, syphilis, hemorrhoids, &c.; so that Nature had had quite a host of diseases in her eye when she brought out this universal remedy. Directions were given as to its use, a bottle a day being recommended (price 2s. 6d. each); but, "although some persons have taken it in very large quantities upon the supposition that, if the usual quantity were good, more of it would be better, yet they have never experienced any ill effects from it"; consequently a few bottles may be used every day if desired. Then, "whenever the case will admit of it, the water should be used externally. In this respect, the rule is without exception"—all of which showed that the remedy had not the vulgar fault of being cheap, it being expressly stated that it is not to be expected that "a few bottles or a few dozen of them" will effect a cure.

The result of Mr. Maben's analysis showed that the water was a common spring water, with no medicinal virtue whatever. The specific gravity of the liquid was 1,000; solid residue, 16 grains per gallon, which consisted of, chiefly, carbonate of lime and a little sulphate of lime and magnesia, chlorides being present in only minute traces. The water was tasteless and odourless, no poisonous metals were present, and generally the analysis corroborated the suspicion which the perusal of the pamphlet had aroused. It was easy to understand why the large draughts of water should be so harmless; and the character of the analysis also explained the excessive sensitiveness of the writer of the pamphlet on the question of "a published analysis," which, even "if it could be accurately obtained," would not "accomplish any good, but, on the contrary, might be productive of much evil."

In some of the diseases which are said to be cured by using Missisquoi water, patients are frequently treated with distilled water, with the most beneficial results, and the author had little hesitation in saying that the miraculous cures effected by this wonderful spring were not due to the medicaments contained in it, but to the combined and wholesome effects produced by the regimen, the imagination, and last, but not least, the *vis medicatrix naturæ*, which would, in these circumstances, have an exceptionally good opportunity of making itself felt.

Another paper by Mr. Maben was on

SALTS OR SALTPETRE?

This note was an appeal for the higher and continued education of pharmacists, its text being an incident which had occurred a few days before. A grocer had sent a sample to Mr. Maben, and asked him whether it was salts or saltpetre. It turned out to be neither the one nor the other, but a very pure sample of nitrate of soda. On making inquiries, he found that this had been supplied by a wholesale house for saltpetre, at 10s. per cwt. or thereabouts, and was being sold as such at 6d. per lb. Mr. Maben proceeded to point out the necessity for retailers of drugs being able to test their genuineness, and he maintained that this was only possible if they were specially trained and educated. He further declared that it was only possible for pharmacists to survive "cutting," and all similar encroachments upon trade, by constantly showing the public that they are specially qualified to carry on the business in which they are engaged. This required a continuance of study, in the real, practical highest sense, by older men as well as by younger, for only thus would the body pharmaceutical be healthy, vigorous, and long-lived.

Mr. Maben also communicated a paper on the dilution of cow's milk in infant-feeding.

There was practically no discussion on these papers, Mr. David McLaren only speaking. He said that there was no law to prevent nitrate of soda being sold for saltpetre.

EUONYMIN

was the subject of some remarks by Mr. Isaac W. Thomson, who reported to the meeting his results of the examination of three samples of the green variety. He had found alum, phosphate of lime, lycopodium, and green colouring matter in them, but had failed to find evidence corroborative of Mr. Collins's statement that the last-named impurity is extract of Indian hemp. Mr. Rutherford Hill, commenting on this paper, repeated the remarks contained in his letter (page 380). Mr. Gibson pointed out that it was not possible to make euonymin without the addition of some dry matter. He thought the colouring matter was ehlorophyll, but this opinion was not shared by the chairman.

This brought the proceedings to a close, and the large audience adjourned to the coffee-room.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

A GRAND GENERAL MEETING of French pharmacists will be held in Paris on August 8, under the auspices of the French Pharmaceutical Association.

PHARMACEUTICAL LEGISLATION.—All hopes may now be abandoned respecting the Pharmacy Bill. Pharmacist Duval, who is a Deputy for Savoy, has informed his fellow-members of the Pharmaceutical Association that Parliament will certainly not consider the measure this session. As a new House is to be elected this year, he was of opinion to do nothing at present, but wait and see what may be the chances with the coming legislature.

MARTIUS (CHARLES-FRÉDÉRIC), a well-known botanist, has just died in this city, at the age of 83. Deceased was born in Paris, and obtained there in 1834 the diploma of doctor of medicine, but devoted himself to botany and natural sciences. In 1846 he was appointed to the chair of botany at the Montpellier faculty of medicine, and in 1863 elected a corresponding member of the Academy of Sciences for the section of rural economy. He made many contributions to botanical and natural sciences, and published several works, some of which are to this day used as test books.

ACADEMICAL COWS.—Thanks to a grant spontaneously made by the Public Assistance and Hygiene section of the Interior Department, the Academy of Medicine has been enabled to build on the Boulevard St. Germain side of its garden a three-story cow-stable for the purpose of producing vaccine virus. From March 7 the vaccinations gratuitously performed at the Academy are to be made with virus of home production, and physicians and midwives will be supplied, free, with either animal or human vaccine points. All requests therefor will have to be made through the mayors and the Interior Department.

A FAIR APPRECIATION OF SACCHARIN.—Dr. Dujardin-Beaumetz, on being twitted about his apparent change of opinion respecting saccharin, has answered as follows, over his signature, in a Paris medical paper:—"From a therapeutic standpoint saccharin constitutes a valuable acquisition, and we can only praise its use either as an antiferment or more especially in the hygiene of diabetics. Should we, on the other hand, consider the matter so far as public hygiene is concerned, saccharin ought to be rejected from food products, *not because it is poisonous*, but because it is not an aliment, and can have no other possible use but to deceive consumers through a sophistication of alimentary substances. Hence it is possible, without ceasing to be logical, for one to condemn saccharin as a fraud in general alimentation, and yet approve of it as a valuable medicine. Such is the stand I have always taken."

POTATO-GROWING FOR ALCOHOL.—At the Academy of Sciences meeting of March 11, M. Schlösing concluded M. Aimé Girard's memoir on the cultivation of potatoes for dis-

tilling. At a previous sitting, it will probably be remembered, M. Girard announced that with proper selection he had been enabled to find a variety of tubers which can be grown in France so as to successfully compete with German potato-alcohol. Several sorts proved satisfactory, namely, the Jeuxey, Magnum-bonum, Redskinned, and Richter's Imperator, but the last afforded the best results. One point, however, remained to be determined—that is, the mode of choosing the potatoes to be set apart for propagation the following season. Experience showed that neither the largest nor the smallest were best for the purpose, but the medium-sized tubers, which are at the same time the richest in starch and most advantageous for planting. Another condition also to be observed is to select the potatoes produced by the tallest and most vigorous plants. Such particulars could have hardly been ascertained by farmers who are not chemists, nor is it likely they will always secure such a yield as the five or six thousand kilos. of starch to the hectare obtained on the experimental farms, but it is quite feasible to grow in France potatoes which it will pay to distil. Indeed the experiment might be worth trying in other countries as well.

THE MUNICIPAL LABORATORY.—The war against the laboratory management shows no signs of abating. The *XIX^e Siècle* (a Radical paper) keeps publishing every morning violent attacks against M. Charles Girard (the other Girard), the director, whom it accuses of all the sins and crimes it is possible for a chemist to commit. It will suffice to relate the following. Some time since, MM. Agobet & Cie. brought to a law officer (*huissier*) a carboy of white raisin wine, requesting him to take therefrom and seal four samples. One of them was submitted to M. Portes, of the Paris Pharmaceutical Society, the head pharmacist of the Lourcine Hospital; another to M. Magnier de la Source, an expert chemist attached to the Paris courts; a third to M. Charles Girard; and, finally, the fourth was preserved by the *huissier*. Both M. Portes and M. Magnier declared the liquid analysed to be pure raisin wine, made by fermentation as usual. On the contrary, M. Charles Girard returned a certificate declaring the stuff to be a compound wholly artificial. In the same manner the municipal chemist was tested with a number of specimens of pepper, some pure, some adulterated in various known proportions, and most wonderful analysis certificates were secured. And it is on evidence of the sort that dealers may be fined or sent to prison, when they are not rich enough to demand a counter-inquest. The war is not waged against the institution itself, but against its present management, and charges of bribery and favouritism are also made against the head chemist, but they are "not proven" enough to be here mentioned.

A HARDENED OFFENDER.—Maurice Faurie, alias "Professor Morisse," has just been for the tenth time convicted of illegal practice of pharmacy, he being the owner of a pharmacy managed by a "cover" next to his medical office, where his prescriptions were dispensed. This time the sentence was fifteen days' imprisonment and 2,000f. damages to the Seine Pharmacists' Provident Society. At last his offensive placards have disappeared from the public urinals.

PARIS SOCIETY OF PHARMACY.

At the meeting of March 13, Professor Schlagdenhaufen, of the Nancy Superior School of Pharmacy, who had come to Paris to sit as one of the judges in the recent competition for the college fellowship (*Agrégation*), was tendered the privilege of the floor.

M. Bourquelot read a communication on the "Sweet Principles of Mushrooms." Mannite and crealose, he prefaced, had been found by other investigators before him in several varieties of mushrooms. Recently he began anew the researches on the same subject, avoiding the confusion of names fallen into by his predecessors. It may here be remarked that M. Bourquelot is quite an authority on mushrooms. So far he had only dealt with the various *Lactarius*, that is, the milk-bearing fungi, but had made repeated and careful experiments. To extract the sweet principles he had followed two different processes. The first consisted in slicing the fresh mushrooms, drying them, and then exhausting them with boiling alcohol of 85 degrees. The spirit being distilled off, and the watery liquor being evaporated to syrupy consistence,

crystals are obtained which can easily be purified by recrystallisations. The product was identified as mannite. The proportion varied greatly, not only between the different kinds of mushrooms, but also with the same, according to the dryness of the season. For instance, some afforded from 2.24 per cent. to 7 per cent. in different years for the same fungus, and some gave only 1.09 per cent. of mannite; while the *L. pyrogallus* produced as much as 13 per cent. of purified mannite. But in all cases only mannite was obtained by the process just described. The other method was to drop the fresh mushrooms, sliced, into boiling water, and then crealose was the sweet principle separated in lieu of mannite. For instance the *Boletus aurantiaeus*, when dried and treated with alcohol, afforded 8 per cent. of mannite, and nothing else; while the same extracted by the second process gave only crealose and no mannite. The apparent anomaly, he thought, was owing to a simple phenomenon of maturation, in the same manner as fruits are known to change in composition on ripening, even after they are separated from the tree. At the same time he would not say that mannite and crealose were the only sweet principles of mushrooms. On the contrary, he had observed in other species principles differing from both, and recalling sometimes dulcete, and sometimes perseite. But he had no time last year to examine them further, and proposed to continue his investigations during the coming season.

M. Léger alluded to the mixture of salol and camphor, now by many surgeons preferred to iodoform as an antiseptic, and gave it as his opinion that the well-known oily liquor resulting from the mixing of the two solid substances is not a combination, but a simple solution of salol in camphor—or camphor in salol—as you like. His reasons were that when it is exposed to cold the liquor lets down crystals of salol; the same crystals are obtained by spontaneous evaporation of the camphor, and finally, on driving off the latter by boiling with water and re-crystallising the residue in alcohol, pure salol is the result. Several specimens were shown of salol thus produced in large crystals. True, such is not the usual appearance of the chemical as it reaches the pharmacist, but a re-crystallisation in alcohol is all that is necessary to make crystals exactly like those just presented.

M. Vigier read a note on lactate of quinine for hypodermic injections. The combination—an excellent one for the purpose—seems to have fallen into an unmerited discredit, because the chemical supplied by dealers is not soluble in three times its weight of water as the Codex says, but requires ten times. M. Vigier said the sparing solubility is owing to the use of the crystallised lactate. A good plan is for the pharmacist to prepare himself his lactate solution, and to keep it as such. The following formula is a convenient one:—

	Grammes
Sulphate of quinine	21.35
Water	400.00
Sulphuric acid (10 per cent.)	25.00
Ammonia	15 to 20.00
Lactic acid	sufficient, or 5.00

Dissolve the sulphate of quinine in the sulphuric acid and water, precipitate with the ammonia, wash, and collect the alkaloid in the usual manner, and, while it is still moist, place it in a porcelain dish with about 100 grammes of water heated to 80° C. Now saturate it with sufficient lactic acid, evaporate the liquor to 100 grammes, and filter. Keep for use in a vial closed with a glass stopper dipped in paraffin.

The solution contains for each 5 grammes 1 gramme of lactate of quinine, and will keep unaltered for years.

At the same time M. Vigier added that recently (three days ago) a manufacturer of chemicals, having heard of his researches on quinine lactate, sent him a specimen of the chemical guaranteed pure and to dissolve in three times its weight of water. The salt was soluble as claimed, but its purity had not been yet tested. A noticeable feature was that the lactate in question is not crystallised, but amorphous. The worst about it, however, is that 20 centimes a gramme was the price charged, while the home-made solution costs only one-fifth of the amount. Consequently, pharmacists are strongly advised to make their lactate themselves.

While the solubility of quinine lactate was under discussion, the general opinion prevailing was that the salt becomes less soluble on being evaporated and crystallised, also that much of the lactate offered by wholesalers is merely sulphate dampened with a little lactic acid. The Codex statement

respecting the solubility of quinine lactate having been found fault with, Professor Marty, who was on the Pharmacopœia committee, remarked that they had at the time apparently good reason for what they had said. A specimen of crystallised lactate supplied by Milan manufacturers did answer this test. Professor Jungfleisch had been informed that the chemical was made by saturating an ethereal solution of quinine alkaloid with lactic acid, dissolved also in ether, and evaporating without heat. The truth of the statement could not be ascertained at the time, and consequently no process was given in the Codex. But, on the whole, it agrees well enough with the facts elicited to-day during the discussion.

Legal Reports.

YORKSHIRE RELISH.

THE case of Goodall, Backhouse & Co. v. S. Bush came before Mr. Justice Stirling in the Chancery Division of the High Court of Justice on Friday, March 8. This was a motion by the firm for an injunction to restrain the defendant from imitating their trade-mark for "Yorkshire Relish." It was arranged by consent that the motion should be treated as the trial of the action, the defendant consenting to a perpetual injunction, and to pay an agreed sum for costs. His lordship accordingly made an order in the terms arranged.

SELLING A CHEMIST'S BUSINESS.—CROCKER v. JONES.

IN the City of London Court on Tuesday, before Mr. Commissioner Kerr, the case of Crocker v. Jones was heard, which raised a point of considerable importance to chemists and druggists. The proceedings were instituted by Mr. George Bennett Crocker, of 15 Walbrook, E.C., who sought to recover the sum of 10*l.* as commission alleged to be due for the sale of a chemist's business which had been entrusted in his hands for disposal by the defendant, Mr. Edmund Jones, chemist, of Miles Bank, Stafford Street, Hanley, Staffordshire.

In answer to the learned Commissioner, Mr. H. G. Raw, who appeared for the defendant, said he admitted the business had been sold by the plaintiff, but they said that the commission charged was in excess of the amount due.

The learned Commissioner asked if anything had been paid into Court, but Mr. Raw replied in the negative.

The plaintiff then stated his case. He said that on November 13 last he received instructions from the defendant to sell his business for 200*l.* He had the particulars and offered the business to a Mr. Spraggett, who went to view the business. After some consideration and negotiation he bought the business of the defendant, who never informed him he had sold it. He obtained his information from the purchaser. He thereupon sent in his account to the defendant, charging him 10*l.*

The learned Commissioner: Without buying the business through you, he bought from the defendant directly?

The Plaintiff: Yes; and secretly.

The learned Commissioner: He says 10*l.* is too much.

The Plaintiff: That is what I usually charge for commission. Chemists' businesses, as a rule, sell for 1,000*l.* to 1,500*l.* My usual charges are 5 per cent. on the first 100*l.*, and 2½ per cent. on the rest, but I charge a minimum of 10*l.*

The learned Commissioner: Are these charges in print anywhere?

The Plaintiff: No, sir. I wrote to Mr. Spraggett, but I got no reply. I wrote to the defendant, who on January 2 replied stating that he had sold the business for 80*l.*, and at that price had almost given it away. He did not send me any money, so I sued him for it.

The learned Commissioner asked the plaintiff if he actually sold the business for 200*l.*?

The plaintiff replied that he did not know how much it was sold for. He knew that he offered the business at 200*l.*, and it was sold through his instrumentality. That was not disputed by Mr. Spraggett.

Mr. Raw said he would prove that the business was not

sold for 200*l.* As a matter of fact it was bought by Mr. Spraggett for 80*l.*

The learned Commissioner ascertained that Mr. Spraggett was not present in court.

Mr. Raw submitted it was the plaintiff's place to produce him in order to make out his case. The defendant sold the business direct for 80*l.* to Mr. Spraggett. The question for the learned judge would be, Could the plaintiff claim any commission at all on the sale of the business? and if he could do so, could he claim at a greater rate than at 5 per cent.?

The learned Commissioner: No; I don't think he can. He is only claiming 5 per cent.

Mr. Raw: No, he is claiming a great deal more than that. He is claiming 5 per cent. on 200*l.* Let me see what that would be. (Loud laughter) Oh, 10*l.* As the business was only sold for 80*l.*, the plaintiff can only recover 5 per cent. on the actual sum the business produced.

The plaintiff said he doubted the business only realised 80*l.* The defendant told him afterwards that he offered it himself at 175*l.*, 80*l.* being the deposit. He therefore presumed that the 80*l.* which it was said had been paid was for deposit.

The learned Commissioner said, in the absence of Spraggett to deny the plaintiff's evidence, the plaintiff was entitled to 7*l.* 10*s.*

The Plaintiff: He has promised to pay me on several occasions.

The defendant was then called to give evidence. He said he sold the business to Spraggett for 80*l.* That was the only amount he had received. When negotiating with Mr. Spraggett he refused to pay the amount he asked, and as he offered 80*l.* he took it. That was all he had received, or expected to receive.

The learned Commissioner: Then you ought to have allowed the plaintiff to complete the purchase of the business. Unless Spraggett is here I must find for the plaintiff for the 7*l.* 10*s.*

The Defendant: He only introduced the customer.

The learned Commissioner: The giving of a card is enough. If you take a house through a house-agent giving you a card, that has been held to be quite sufficient to entitle him to his commission.

Mr. Raw asked for an adjournment, to produce Mr. Spraggett.

The learned Commissioner: Yes; but you must pay the plaintiff's costs of the day.

Mr. Raw said that he would do so.

The case was accordingly adjourned for Mr. Spraggett's attendance.

A LEGACY TO A CHEMIST.

THE case of Lakeman v. Culmer has occupied the attention of Mr. Justice Butt and a special jury, sitting in the Probate Division of the High Court of Justice, several days this week, and has created considerable interest. The plaintiff, Mr. Jasper James Lakeman, is a chemist and druggist and a dentist, carrying on business opposite the church, Leytonstone, E. In May, 1885, he made the acquaintance of Miss Ann Culmer, a lady of about 50, who had lived for many years with a clerk named Shirley, and by him had two children, both of whom died. Miss Culmer was always known as "Mrs. Shirley," and Mr. Shirley left all his property to her. She gave way to drink, and when returning from Epping Forest one day in May, 1885, she dropped into Mr. Lakeman's shop for a bottle of lemonade. Afterwards she was a frequent visitor to the shop, and made the plaintiff a confidant, telling him all about herself and of the trouble she had had with her relations. Subsequently, at her request, he gave her writing lessons. She made the acquaintance of Mrs. Lakeman and the children, and became quite a friend of the family. In January, 1887, she first spoke to Mr. Lakeman about her will, and at her request he wrote down her bequests. The paper was afterwards given to Mr. Pays, a solicitor, the residuary clause not having been inserted. At the time she told the plaintiff that she would tell Mr. Pays himself what she intended to do for Mr. Lakeman. The will was executed on January 14, 1887, and by it the plaintiff was made the residuary legatee, the value of the estate being between 10,000*l.* and 12,000*l.* He propounded the will, and probate was opposed by the defendant, a cousin of the

deceased, who pleaded undue execution, unsound mind, and that the residuary clause was obtained by the undue influence of the plaintiff and his wife, who, in evidence, denied the allegation. Dr. Porter deposed that he had attended the deceased, and had always found her competent to transact business. She was often intoxicated with champagne, but sufficiently sober to know what she was doing.

For the defendant, evidence was given to show that Miss Culmer suffered from delusions, and on Wednesday, after counsel had addressed the jury on both sides, Mr. Justice Butt summed up, and the jury gave a verdict to the effect that the testatrix was not sane and sound at the time she executed the will. Mr. Justice Butt accordingly pronounced against the will, making no order as to costs.

BANKRUPTCY REPORT.

Re JOHN PHILIP PHILLIPS, Staveley, Chemist and Druggist.

A MEETING of the creditors of this debtor was held on Saturday at Chesterfield, Mr. A. J. Hall, the Assistant Official Receiver for Derbyshire, presiding. It appeared from the statement of affairs that the sum due to unsecured creditors was 480*l.* 13*s.* 9*d.*, and to creditors fully secured 260*l.* The value of securities was estimated at 500*l.*, so that there was a surplus of 240*l.* Including this sum, and the amount estimated to be produced by the stock-in-trade, fixtures, furniture, book debts, &c., the total assets were 487*l.* 11*s.* 1*d.*, less 7*l.* 4*s.* 9*d.* due to creditors for rent, wages, &c., showing a deficiency of 7*s.* 5*d.* only. Mr. Hall stated to the meeting that all the creditors would be paid in full. Mr. O. H. Harrison, chartered accountant, of Derby, was appointed trustee, with a committee of inspection.

Trade Notes.

WE have received a copy of Messrs. W. Edwards & Son's catalogue of proprietary medicines, druggists' sundries, &c., for 1889. The prices are given as for "net cash."

MR. A. DE ST. DALMAS, of Leicester, sends us a sample of an improved adhesive plaster on flesh-coloured cambric. It is a beautifully spread plaster, which can scarcely be noticed when placed on the skin. It is well worth introducing in place of the old-fashioned and often brittle white calico plaster.

MESSRS. R. HOVENDEN & SONS, of Berners Street, in sending out cheques in payment of accounts, enclose a printed form which states: "It is not necessary for you to acknowledge the receipt of this cheque, as your endorsement is sufficient receipt for the payment of your account. As this mode of remitting saves you stamp, postage, or collection, while it is more expensive to us, we have deducted 3*d.* to defray expenses." Of course, if there is anything on the back of the cheque of the nature of a note or memorandum acknowledging receipt, which the receiver signs, and the amount is 2*l.* or upwards, the receiver must use the ordinary 1*d.* stamp.

MESSRS. BUTLER, McCULLOCH & Co., of South Row, Covent Garden, W.C., submit for our inspection a selection of packed herbs, part of a new series which they are introducing at present. The trade in herbs is on the increase, we understand, and it certainly is a department of business which chemists ought to encourage, for however much they are recommended for the cure of disease, no Inland Revenue officer can pounce upon the retailer for infringement of the Medicine Stamp Act. The packets before us are in every way suited for the trade. They are put up in Parmenter's patent folding boxes, which permit easy inspection of the contents, and each bears the uses and directions for preparing the remedy. Messrs. Butler, McCulloch & Co. have also prepared a useful compendium of the botanical and common names of the herbs, copies of which are supplied. They print chemists' own names on the packets and compendiums, and their own trade-mark not their name, appears in both.

Gazette.

PARTNERSHIPS DISSOLVED.

Brostoski, M., & Co., Sheffield, aerated-water manufacturers.

Good, J., & W. E., Dorchester, surgeons.

Mulliner & Grant, High Holborn, dentists.

Nobbs, Stent & Co., Dorchester, mineral-water manufacturers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Inger, George Edward, Leicester, late of Nottingham, out of business, late chemist and druggist.

Jeffreys, Thomas, Glyn, Neath, Glamorganshire, mineral-water manufacturer.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Credland, Samuel Hooton, Sheffield, varnish, paint, and colour manufacturer—March 20, Official Receiver's offices, Sheffield; April 4, County Court Hall, Sheffield.

Harris, Moss, Blackpool, formerly of Southport and Liverpool, dentist and artificial teeth manufacturer—March 22, Official Receiver's office, Preston; March 22, County Court offices, Preston.

Inger, George Edward, Leicester, late of Nottingham, out of business, late chemist and druggist—March 28, Official Receiver's offices Leicester; April 3, Castle, Leicester.

Jeffreys, Thomas, Glynneath, Glamorganshire, mineral-water manufacturer—March 20, Castle Hotel, Neath; April 9, Town Hall, Neath.

McConnal, Alan, Appleby, chemist—March 16, 37 Stramongate, Kendal; March 16, Court House, Kendal.

ADJUDICATION.

Inger, George Edward, Highfields, Leicester, late of Nottingham, out of business, late chemist and druggist.

NOTICES OF DIVIDENDS.

Kroll, Ludwig (trading as L. Kroll & Co. and the British Hygienic Company), Blundell Street, Caledonian Road, late of Mark Lane, City, chemical manufacturer—supplemental div. of $\frac{3}{4}$ *d.*, any day except Saturday, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

Ridley, Charles Henry, Maidstone, chemist and druggist—first and final div. of $\frac{1}{4}$ *d.*, March 14, Monument Yard, E.C.

APPLICATION FOR DEBTOR'S DISCHARGE.

Jay, Alfred (trading as Jay père et fils), late of Fitzroy Street, Euston Road, present address unknown, wholesale perfumer—April 5, High Court of Justice in Bankruptcy.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Huddleston & Son (Robert Ousby Huddleston, trading as), 63 Lower Broughton Road, Manchester, and 114 Clarence Street, Lower Broughton, Manchester, chemists and druggists. Date, March 6; filed, March 11; unsecured liabilities, 498*l.* 12*s.* 8*d.*; estimated net assets, 252*l.* 13*s.* 11*d.*; creditors fully secured, 88*l.* 8*s.*; composition, 6*s.* in the pound, payable by three equal instalments on May 6, September 6, and December 6, next.

	£	s.	d.
Bourne, Johnson & Latimer, London	20	4	0
Wyleys & Co., Coventry	53	5	10
Woolley, Sons & Co., Manchester	35	16	8
Salford Paint and Varnish Company, Salford ..	13	19	3
Barnes, John, Manchester	11	10	0
Watkin, J. R. (administrator of the estate of the late John Watkin), Reddish (debt, 394 <i>l.</i> 7 <i>s.</i> 2 <i>d.</i> , less value of security, 88 <i>l.</i> 8 <i>s.</i>)	305	19	2

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DISINFECTANTS

(FLUIDS, POWDER, SOAPS),
NON-POISONOUS, PLEASANT, AND BEST.
 Gold Medals, Calcutta 1884, Paris 1885, Antwerp 1886, Ostend 1888.

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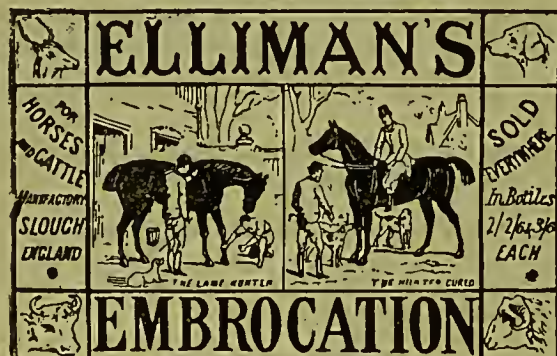
A RED DIAMOND.

This Label will henceforth also serve to distinguish the Hungarian Aperient Water sold by the Company from all other Aperient Waters.

DEMAND THE DIAMOND MARK.

Of all Druggists and Mineral Water Dealers. [1]

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 Free to any Address.



See First Page in the First Issue of this Month for latest particulars.



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 FARRINGTON ROAD, LONDON, E.C.
PURE CRUSHED LINSEED IS NOW
17/- cwt. CARRIAGE PAID

TO ANY RAILWAY STATION IN ENGLAND AND HALF TO STATIONS IN SCOTLAND, IRELAND, AND WALES.

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EVERY DESCRIPTION OF
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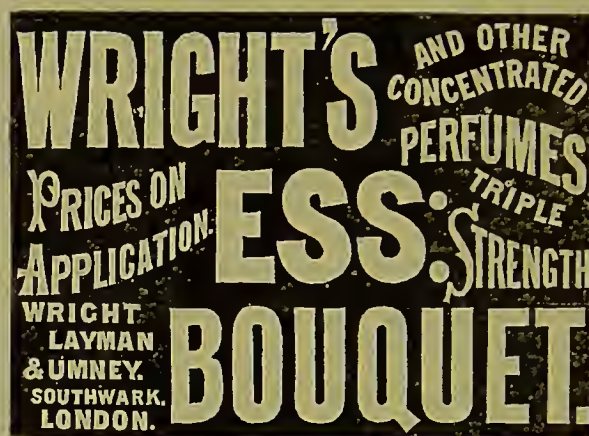
OUR EXTRACTS

(Ordinary and Tasteless, Solid and Liquid)
 "retain undiminished Aperient Properties."

SPURIOUS BARK IS NOW BEING OFFERED.

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[2]

SILICATED CARBON FILTERS
AERATED

PATENT MOVABLE BLOCK.

See Advertisement, page 16 (bottom folio).

STERN'S PUMILINE

ESSENCE, EXTRACT,
 JUJUBES, SOAP,
 PLASTER (St. Dalmas).

11 BILLITER SQUARE, LONDON, E.C.

Fletcher's
Concentrated Liquors

See DIARY, 1889,
 Pages 17 and 18.

EDITORIAL NOTES.

THE RAILWAY RATES REVISION.

THE wholesale drug and chemical trades have lost no time in organising themselves in opposition to the proposed new maximum rates of the railway companies, and the confident tone of all the principal speakers at the important meeting held at the London Chamber of Commerce on Tuesday augurs well for the success of the case which is being prepared by the sub-committee of the Chemical Section. The great interest which this question has aroused in the wholesale drug trade was proved by the fact that no less than thirty-

four members of that trade, and its allied branches, attended the meeting, including representatives of some of the principal provincial houses. And it seems certain that gradually, as the two sub-committees amass facts and evidence to place before the Board of Trade, several other representative houses, which for one reason or another were not personally represented on Tuesday, will join the movement, and impart additional strength to the protest which will be lodged with the authorities on behalf of the trade. The tables prepared by Messrs. Umney and Francis and the opening speech of Mr. Tyrer placed the largeness of the proposed increase in the railway rates in the plainest possible light, and it is very satisfactory to find that the appeal for subscriptions to enable the Chemical Section of the Chamber to secure proper legal assistance is likely to be liberally responded to, not only by the wholesale houses, but also, as the letters received by Messrs. Oldfield, Pattinson & Co. and other provincial houses showed, by a large number of the customers of those firms all over the country. It is to be hoped that the sub-committees now appointed will confine themselves strictly to making out a thoroughly sound case against two or three of the most grievous points of complaint in the proposed revised rates, and not waste their strength by going into all the lesser grievances, or into some of the other numerous questions also mooted at Tuesday's meeting, which, however important in themselves, are scarcely germane to the question at issue. The main points of grievance in the proposed scheme are the advance in the classification of drugs in hampers to the fifth or dearest class, the doubling of the rate and of the extra charges on "smalls" or parcels under 5 cwt., the special charges for "terminals" and "service," and to some extent the proposed new rules on "empties." The latest date for sending in objections being April 13, it is clear that the sub-committees appointed cannot afford to lose a day in commencing the preparation of their cases, and they will have quite enough to do in getting up satisfactory evidence to rebut the main points of complaint in the companies' demands which we have enumerated. As regards the assertion that the companies would be precluded owing to considerations of competition, concern for the interests of trade, and so forth, from making the fullest use of any powers which may be vested in them, experience has shown that not the slightest trust can be placed in any such assurances on their part. Preferential rates, which happily are now about to be abolished, have long been a scandalous blot in our railway tariffs and a gross injustice to British trade interests, yet nearly all companies connected with foreign commerce have used their full powers in respect to these differential tariffs for years, without taking the slightest heed of any protests, however just. Moreover, the extortions practised on lines which are free from competition, and the many peculiarities of railway tariffs generally, fully warrant the assumption that, if once the railway companies succeed in obtaining the powers they now seek, there will be very little consideration shown to any trade interests.

PHARMACEUTICAL CARELESSNESS.

It seems open to doubt whether chemists generally pay so much regard as they might to the injunctions of the Pharmacopœia and the existence of the Sale of Food and Drugs Act. For some time back we have published reports of the quality of galenical preparations as supplied in the ordinary course of retail dealing, and all show an astonishing degree of inexactitude and carelessness on the part of the retailers. To go no further back than last week, in a note on "Tincture of Opium" Mr. Hoseason shows

that of ten samples of the preparation obtained in Edinburgh not a single one was strictly pharmacopœial. The variation in morphine value is not creditable to British pharmacy. Four samples only were near the official strength—3·3 grs. of morphine per ounce—one contained 5 grs., and the rest varied between 2 and 2·7 grs. of morphine per ounce. In this respect the samples were little better than eighteen obtained in London, Edinburgh, and Glasgow, examined and reported upon to the 1876 conference by Mr. D. B. Dott. The variation in morphine strength of those samples extended from 0·55 to 4·37 grs. per ounce, five being under 2 grs. In the twelve years which have intervened there does not seem to have been any improvement in carrying out the simple operations of making laudanum. The result is very prejudicial to exactitude in therapeutics, and is all the more serious owing to the fact that laudanum is a popular narcotic. But the variation in morphine value is in this case equalled by the uniform deficiency in spirit, a circumstance which also openly invites prosecution under the Sale of Food and Drugs Act. According to Mr. Fletcher's tables (this journal, January 26, page 108) tincture of opium should contain 95·8 per cent. of proof spirit; whereas the highest amongst the samples under notice was 86·5 per cent., and the lowest 73 per cent., with an average of 80 per cent. This deficiency arises no doubt from the use of undried opium; but that alone would not account for the excess of water in the worst samples, and we are forced to the conclusion that the proper proportion of spirit has not been put into the tinctures. Now, however leniently we may regard this matter, it is not at all creditable to the retailers, and we may fairly assume that Edinburgh is no worse than other towns. It has, indeed, every reason to be better, for it is pretty generally admitted that that city has educational and practical advantages which are highly favourable for the development of pharmacy in the best sense. The fact is, however, that too little attention is given to familiar operations, and few chemists have advanced so far as to appreciate the necessity of strictly following pharmacopœial injunctions by testing results. A chemist has no more right to sell laudanum containing 2 grs. of morphine per ounce than one made with 1 oz. of official opium per pint. Mr. Hoseason's suggestion to make tincture of opium from the extract is a good one; the method would provide a more constant tincture than we can at present boast of; but it practically amounts to shifting responsibility to the wholesale dealer. This is not what is wanted. That every chemist and druggist should personally guarantee the articles he deals in, is the only ground for a higher scale of remuneration than ordinary traders can legitimately demand. And, apart from that, pharmacy is a sufficiently technical calling to entitle pharmacists to have some pride in their work.

ANALYSIS IN PARIS.

THE proceedings of the Municipal Laboratory in Paris are just now exciting a great deal of interest among the traders of that city. Our French correspondent has narrated some particulars of the charges made against the director of the laboratory by the morning paper, the *XIX^{me} Siècle*, and we are now promised a piquant libel action, the effect of which will be to expose the skeletons in the Municipal Laboratory if there are any to be exposed. The laboratory is worked under the direction of the Chief of Police, and innumerable prosecutions and convictions of fraudulent trading have been the result of its certificates. The journal named sets aside all ceremony, and charges M. Girard not only with incompetence, but also with transactions which involve the sacrifice of his independence towards particular

firms. The most notable charge of this kind is one made in reference to the firm of Messrs. Armet de Lisle & Co., the famous manufacturers of the Pelletier brand of quinine. M. Girard is said to receive a retaining fee of 4,000*f.* a year from this firm as consulting chemist. He does not deny this, but he says pharmaceutical products do not come within the scope of the work of the Municipal Laboratory; any such samples received are sent to the *École de Pharmacie* for examination. But the journal returns to the charge with a very circumstantial history of a vegetable black invented by M. Girard for Messrs. Armet de Lisle & Co., which is made from the exhausted bark in their works, and is said to be of use for clarifying wine. An emissary from the journal—himself a wine merchant—asked the representative of Messrs. Armet de Lisle whether they would sell to him the monopoly of this article, and then further asked whether they could assure him of the benevolent neutrality of M. Girard. The reply of the representative of the firm and its signification are, of course, matters of dispute. The matter is to be threshed out before the courts, M. Girard having obtained permission to prosecute the journal for its aspersion on his professional reputation.

THE COLLEGE OF SURGEONS.

THE relations of the Royal College of Surgeons of England and its members are approaching a climax. The members have a grievance, that being that the Council does not allow them a voice in the control of the College's affairs. But according to the ancient constitution of the College the members are entitled to meet together for their common affairs, and to attend and vote at the customary annual meeting, and at all other general meetings of the society. For more than half a century, however, the privilege has lapsed, and although from time to time individual members have asserted themselves and given the authorities trouble, it is only within the past two years that the members as a body have attempted to regain their ancient privileges. A few weeks since the members endeavoured to meet in the College, but they were forcibly kept out. Various matters have hastened the crisis. It is alleged, that owing to the system of election pursued, the Council is practically confined to London members. There are twenty-eight members of Council, each of whom serves for seven years, four retiring annually by rotation. The elections take place in July of each year, but the system pursued of only allowing personal votes to be given at the College—no "paper" votes being accepted—practically disfranchises many of the provincial members. The result is that the Council is almost entirely in the hands of the senior surgeons of the large London hospitals, who, on many questions, are not in sympathy with their provincial brethren. A similar complaint is also made against the examiners at the College, and exception is taken to the persistent refusal of the Council to admit women as members of the College, whilst another ground of complaint is as to the mode in which the legacy of 300,000*l.* left by Sir Erasmus Wilson is being dealt with. It is alleged that this legacy is being frittered away in creating laboratories for the purposes of research altogether useless to surgery. A remedy for these grievances will be found, the members hope, in a Bill which has been drafted by a committee appointed by a meeting of the fellows and members. This Bill deals with the election of Council, office-bearers and examiners, the formation of by-laws, the investment of property, and all other affairs of the College. It will be energetically pushed through Parliament, and it is considered that some good will result from this endeavour to place on

the statute-book "The Royal College of Surgeons Act, 1889." Meanwhile, several members of the College, including Mr. Lawson Tait, have instituted proceedings against the Council. Mr. Tait wishes to recover damages from the Council for libel by publishing his name in the medical journals as having broken a certain by-law, and threatening him with suspension from the privileges of membership. The action is not expected to come on for hearing until November, but on Friday, March 9, judgment was obtained in the Chancery Division on an application for an interim injunction, the Council of the College, as defendants, giving an undertaking not to proceed with the "infliction of penalties" under the by-law until the action for libel is decided. Before that takes place it is expected that Mr. Tait and some of those with him will have secured seats on the Council, or that the Bill referred to will have become law.

DR. LE CARON AND THE ILLINOIS PHARMACEUTICAL ASSOCIATION.

THE editor of the *Western Druggist*, of Chicago, does not seem quite satisfied with his whilom friend, collaborator, and president, Dr. Henri Le Caron. He describes him as "a swarthy, courteous, genial, and, in some respects, able man—whose voice was heard at nearly every meeting of the Illinois Pharmaceutical Association, and whose influence was felt in all debates of importance. No man was better known to the druggists of his State, and none seemed to take a deeper interest in measures affecting their commercial welfare." It is further stated that he professed to be coming to Europe as agent for some American proprietary preparations, taking also a commission for the journal referred to. With curious naïveté this guileless editor goes on to assure his Chicago associates that Le Caron's life in that neighbourhood was "a career of fraud and black-hearted duplicity," and he demands his ostracism from the company of honest men everywhere, and that his name and memory shall be blotted from the roll and records of the Association. Our contemporary proceeds to say that in the office of the *Western Druggist* Le Caron never betrayed in manner or word the dual character he was sustaining. It was hardly likely that the champion spy of the century, who could deceive the most suspicious and interested of his associates for twenty years, would have revealed himself to a pharmaceutical editor who was in no way mixed with his concerns. Mr. Englehard says further that he does not believe that Le Caron dreamed, when he accepted the presidency of the Illinois Pharmaceutical Association, of the dishonour he would some day cast on the good name of the society. We hope it will not hurt the feelings of members of that distinguished society to hear that hitherto nobody had ever even thought of them in connection with Le Caron. But Mr. Englehard sees in Le Caron's life among Illinois pharmacists quite a different effect. We do not hold brief for the abused major, but we are inclined to think that our contemporary is a little wild. Casuists must determine whether a man has a right to employ deception for the purpose of unmasking a tremendous crime and averting a terrible danger; and the inferences to be drawn from Le Caron's evidence are matters for the counsel in the Commission to deal with. But Englishmen, who now know the man, or at any rate one of the men, who saved this country from the cruel and cowardly dynamite conspirators, will certainly not refuse to render homage to the constancy and courage of the man who for twenty long years carried on for their benefit his life of duplicity and danger.

THE CHEMISTRY OF PEPPER.

WE briefly referred in November last (vol. 33, page 723) to Dr. William Johnstone's discovery of piperidine in pepper, remarking that he did not state "how he separated the alkaloid piperidine, and it would be of importance to know if means were taken to prevent the hydrolysis of piperine." The information is now supplied in a paper communicated since to the Society of Public Analysts. This paper really deals with the chemistry of pepper as a whole, and as such is an important contribution to chemical literature. Nine samples of black pepper, comprising the different commercial varieties, as well as three specimens of white pepper, were obtained from Messrs. Lewis & Peat. It is interesting to note the difference in the weights of these. Taking the average of three weighings of 100 peppercorns they were found to be, for the black—Acheen, 5.1976 grammes; Alleppy, 3.8438; Kampoot, 4.4540; Lampong, 3.5410; Penang, 3.9028; Siam, 4.2776; Singapore, 4.5338; Tellicherry, 4.4421; and Trang, 4.8101. The white varieties were, on the whole, heavier, viz.—Penang, 4.9360 grammes; Siam, 5.1441; and Singapore, 4.6936. Of the analytical factors the only one which Dr. Johnstone considers of value, from the analyst's point of view, are the figures for ash, which varied from 3.51 to 4.66 per cent. in black pepper, 1.07 to 2.47 per cent. in white; 7.57 per cent. was given by long pepper, and 16.34 per cent. by black pepper husks. Apparently, therefore, the presence of long pepper and an undue amount of husk in ground black pepper may be conjectured by a determination of the percentage of ash. Essential oil was found to vary from 0.98 per cent. in the Penang black pepper to 1.87 per cent. in the Alleppy. A very low figure, 0.53 per cent., was shown by the Penang white, the other two giving 1.41 and 1.14 per cent. respectively; thus corroborating previous observations. The spirit soluble matter was far from constant in the different varieties, and coming to the alkaloids we find equal want of constancy. Thus of piperine Acheen yielded 12.21 per cent., Alleppy 13.03 per cent., and Lampong 11.05 per cent. All the others gave less than 9 per cent., the lowest being Trang, 5.21. The white varieties showed greater uniformity, Penang giving 8.87, Siam 7.79, and Singapore 8.66 per cent. The alkaloid was determined by hydrolysing with an alcoholic solution of potash, whereby the piperine is converted into piperidine and piperic acid. The hydrolysed solution being distilled gave a distillate containing the piperidine, which was quantitatively determined by titration with decinormal sulphuric acid. The method gave excellent results in blank experiments with pure piperine. As to the piperidine existing as such in the pepper, the percentages are what have already been given. The average for black pepper is .56 per cent. (husks .74 per cent.), and for white .32 per cent. The results were obtained by distilling the pepper with water, and titrating the distillate. Volatilisation of the alkaloid in the dry way gave only one-third of the yield obtained when water was used, thus favouring the correctness of our suggestion that the piperidine may be the result of the hydrolysis of piperine. Dr. Johnstone says, however, that this is not the case, for if pure piperine is boiled with water no piperidine is obtained; but he is "disposed to the theory that there may be a particular ferment contained in the pepper capable of producing the hydrolysis of piperine when boiled with water, or it may be due to the existence of another alkaloid more easily hydrolysed than piperine." In his previous note Dr. Johnstone attributed the variable pungency of pepper to the difference in the piperidine content, and in a letter, which will be found on another page, he again refers to this matter. It is evident from the results

recorded in the paper under notice that his assertion has a very slender basis. Pepper contains a resinous principle which all authorities are agreed is the source of its pungency. Dr. Johnstone made no precise determination of the resin in the peppers which he examined, and has not even proved that piperidine is so pungent a body as to impart, in minute quantity, this peculiar property to pepper. It would be unwise, therefore, to accept the conclusions which he arrived at on this point in the November note without further experiment.

CINCHONA-GROWING AND QUININE-MAKING IN INDIA.

ABOUT nine months ago we published particulars of the process for manufacturing sulphate of quinine which had been devised by Mr. J. A. Gammie, of Mungpoo, the acting superintendent of the Sikkim cinchona plantations, and adopted by the Indian Government. Mr. Gammie, in a recently issued annual report on the plantations under his care, gives some further particulars of this process, of which mention is also made in Mr. Lawson's last report on the Nilgiri plantations in Southern India. Mr. Gammie tells us that samples of quinine made at Mungpoo by the cold oil process have been tested by three professional analysts, all of whom have pronounced them equal to the best in the market and perfectly pure. Up to March 31, 1888, over 5,300 oz. of sulphate of quinine had been prepared at Mungpoo by the cold process, and nearly the whole of this has been supplied to the Medical Depôt in Calcutta. This is exclusive of the cinchona febrifuge made at Mungpoo, of which the output reached 6,917 lbs., and which is used in Governmental establishments in Bengal, the Straits Settlements, Mauritius, &c. The average percentage of febrifuge extracted from the bark of the Government plantations last year was 3 per cent. The machinery employed in quinine-making is working very satisfactorily. The administrators of the Nilgiri plantations in Southern India have also decided to adopt the cold oil process so successfully inaugurated at Sikkim, and the necessary plant and chemicals for this purpose have been ordered from England, and will, it is expected, be in working order in April of the present year. In that case it is thought that during the first year about 80,000 oz. of quinine sulphate, besides other cinchona preparations, will be produced. Mr. Lawson, at the time of writing his report, proposed to sell the Indian-made quinine sulphate at the rate of 25 rupees per lb., or about 2s. 1d. per oz., but it was subsequently decided to reduce that estimate for the present to 1s. 9d. per oz., or 21 rupees per lb., at which price it is thought the Bombay Medical Department, which alone requires some 20,000 oz. per year, and a large number of private Indian firms will be glad to purchase the Indian in preference to the European-made article. But it appears that in order to be able to sell quinine at the price mentioned the Nilgiri plantation works will have to do a very extensive trade to pay their way—the Government does not look for profit—for the provisional estimate for 1889-90 only gives an income of 40,000 rupees, against an expenditure of 73,400 rupees. The principle of selling the Government grown and made drugs in the open market having thus, apparently, been adopted, we may expect that a serious attempt will be made to compete with the private firms who now supply part of the Indian markets.

As regards cinchona cultivation in the Sikkim plantations, Mr. Gammie points out that the red varieties, which yield the cinchona febrifuge, are being steadily reduced in number, and replaced by *Ledgeriana* and hybrid seedlings. During the year under review 375,092 trees, mostly of the

red variety, were uprooted, and 424,200 Ledger and hybrid seedlings put out in the plantations. On April 1, 1888, there were still 2,180,000 *Succirubra* plants left, against 2,950,200 of other varieties. The bark harvested was nearly all consumed at the factory for febrifuge and quinine manufacture. Experiments have been made at Sikkim to acclimatise the South American cinchona, which yields the bark known as hard Carthegena, and also the tree yielding the Cuprea bark. These experiments have not been successful, but Mr. Gammie does not think that that is a matter of much importance, considering that both plants yield a bark of comparatively low value, though the quinine is more easily extracted from the Cuprea than from most other barks. On the other hand, the plants raised from the seed of the three varieties of *Calisaya*—viz. verde, morada, and Zamba-morada—which were procured from their South-American habitat about five years ago, are doing well, and promise to be only slightly inferior to the Ledger variety in point of quinine-yield. These three calisayas are not identical with the *C. Ledgeriana*, as was supposed by the collector, but are of a more luxuriant growth, with larger leaves, but similar flowers and seed-vessels. They vary amongst themselves in outward appearance and quality, just as the ledgerianas do. They have the drawback of being more particular as to soil and situation than the *Ledgeriana*, and have died out in several places where that variety probably would have lived. But their quicker and more robust growth is not unlikely to more than counterbalance these shortcomings. Like *Ledgeriana*, they are difficult of propagation by cuttings, and seed will have to be depended upon for increasing their number to any great extent. There is every prospect that one or more of these calisayas will prove a success, and their introduction must, therefore, be considered one of the most promising and important experiments ever made at Sikkim. There are now in British Sikkim three plantations under Government control—viz. at Mungpoo, Sittong, and Rungjung—containing respectively 3,685,504, 1,099,000, and 551,000 plants. The Mungpoo division, it will be seen, is by far the most important one. The first dry bark, to the extent of 6,400 lbs., was harvested there in the season of 1869-70, and the yield gradually increased to 358,100 lbs. in 1882-3, since when it has fallen to 217,780 lbs. in 1887-8. The Sittong division gave its first harvest of 15,850 lbs. in 1879-80, and has since risen to a yield of 72,630 lbs. in 1887-8. The plantation at Rungjung (a place which is really situated in British Bhotan) has not by any means been a success, owing to its exceptionally heavy rainfall. It is now about to commence to yield bark.

NEW COMPANIES.

BOVRIL (LIMITED).—Capital, 150,000*l.*, in 5*l.* shares; object, to acquire the business carried on by John Lawson Johnston, at 30 Farringdon Street and 16 Bear Alley, London. The first subscribers are:—J. L. Johnston, 30 Farringdon Street; J. E. Macfarlane, 24 Philbeach Gardens, S.W.; R. Farquharson, M.P., 1 Porchester Gardens, W.; W. G. Pearson, 66 Southwood Lane; A. Walker, 88 Mosley Street, Manchester; G. W. Neish, 66 Watling Street, E.C.; and A. L. W. Bevan, 18 Abingdon Street, Westminster. The first directors are J. L. Johnston, R. Farquharson, A. Beveridge, and A. Walker. Qualification, 100 shares; remuneration, 150*l.* per annum to each, and an additional 10 per cent. of the balance of any net profits after 15 per cent. dividend.

SEQUAH (LIMITED).—Capital, 50,000*l.*, in 1*l.* shares; object, to acquire the business lately carried on at 46 Farringdon Street, under the style of Sequah Indian Medicine. The first subscribers are:—J. S. Marsden, 89 Libert Road, Forest Gate; A. C. H. Watkin, 7 Grumman Road, Peckham;

F. Ward, 8 Bromley Road, Tottenham; C. K. Vokins, 85 Gracechurch Street; H. Marshall, 15 George Street, E.C.; J. Herbert, 11 Queen Victoria Street; F. Threadfell, 60 Linga Road, S.E. Registered without special articles of association.

CAMBRIDGE CHEMICAL COMPANY (LIMITED).—Registered on February 25. Capital, 10,000*l.*, in 1*l.* shares; object, to acquire the business carried on by J. West Knights and W. Dennison Gull, at Shelford, Cambridge, under style of the Shelford Chemical Company, as manufacturers of disinfecting or antiseptic powders and fluids. The subscribers are:—J. W. Knights, Cambridge, county analyst; J. B. Bird, Cambridge, merchant; W. K. Bird, jun., Cambridge, vinegar maker; J. Muggleton, Cambridge, salesman; H. F. Bird, Cambridge, vinegar maker; F. W. Bird, Cambridge, mustard manufacturer; and G. A. Matthew, Cambridge, solicitor. Messrs. Knights, J. B. Bird, and F. W. Bird are the first directors. No member of the company will be allowed to transfer his shares to anyone not a member of the company without the sanction of the directors.

SALA'S CITY DRUG STORES (LIMITED).—Capital, 5,000*l.*, in 1*l.* shares; object, to vend and sell drugs. The subscribers, who hold one share each, are:—James Macdonald Garland, accountant, 20 Temple Street, Birmingham; Joseph Henry Butler, machinist, 55 Tindal Street, Birmingham; Thomas Garland, goldsmith, 94 Ninth Street, Birmingham; Thomas Gossage, cabinet manufacturer, Mary Street, Balsall Heath; Thomas Dennington, bank clerk, Rozell Villa, Kings Heath; Thomas Edward Bond, engineer, 8 Thorp Street, Birmingham; Thomas James Witherington, chemist, 95 Smallbrook Street, Birmingham.

Personalities.

MESSRS. FELLOWS & Co. have opened a very handsome pharmacy in the Harrington Road, South Kensington.

MR. W. H. WESTMORELAND has purchased the business of Mr. A. F. Damon, at 7 St. Helen's Terrace, St. Quintin's Park, North Kensington, W.

MR. A. C. THOMPSON has taken over the chemist and druggist's business established at Manor Terrace, Sidcup, by Messrs. Judd & Co.

MR. W. E. BUSH (Messrs. W. J. Bush & Co., Artillery Lane, E.C.), who acted as president of the chemical section of the Brussels Exhibition, and as a member of the supreme jury, has been honoured by the Duke of Saxe-Coburg-Gotha for his services in these capacities. The Duke has conferred upon him the family order, with the rank of knight officer.

Obituary.

BROWN.—On March 3, at Runcorn, Mr. Andrew Brown, chemist and druggist. Aged 64. The deceased, one of the oldest druggists in Runcorn, was formerly town traveller to the firm of Messrs. Clay, Dod & Co., of Liverpool.

BUCKLE.—On February 19, Mr. Christopher Francis Buckle, pharmaceutical chemist, Gray's Inn Road, London. Aged 77.

CHAPMAN.—On February 23, Mr. William Chapman, chemist and druggist, Grassington, Yorks. Aged 70.

LEADBETTER.—On February 18, Mr. William Austin Leadbetter, pharmaceutical chemist, Melton Mowbray. Aged 65.

LOANE.—On December 25, 1888, Mr. John Loane, chemist and druggist, Dock Street, Whitechapel, London. Aged 75.

MIDDLETON.—On March 4, Mr. Francis Middleton, pharmaceutical chemist, Bel-ize Road, Hampstead. Mr. Middleton was engaged in the establishment of Messrs. J. Bell & Co., Oxford Street, from 1838 until 1878, and had since been living in retirement.

SNAPE.—On February 21, Mr. Walter Snape, chemist and druggist, Addison Road North, Notting Hill, London.

Practical Notes and Formula.

ARTIFICIAL KOUMISS.

A CORRESPONDENT of the *Mineral Water Review* gives the following formula for this beverage:—

	Grammes
Swiss condensed milk	100
Lactic acid	1
Citric acid	$\frac{1}{2}$
Cognac	15

Carbonated water at 60 or 80 lbs. pressure to measure 1 quart imperial.

MRS. ALLEN'S HAIR RESTORER.

THE following formula is given by the *Bull. Soc. Ph. Sud.* It is new so far as the canella bark is concerned:—

Precipitated sulphur	1.69
Canella alba	0.20
Glycerine	32.00
Crystallised acetate of lead	2.65
Water	63.00

WHITE'S TOOTH-POWDER.

A CORRESPONDENT of the *Amer. Drug Clerk's Journal* furnishes the following formula:—

Precipitated chalk	20 oz.
Bitartrate of potash	$1\frac{1}{2}$ "
Powdered orris root	6 "
„ pumice	1 "
„ borax	$\frac{1}{2}$ "
„ myrrh	2 "
„ nitre	2 "
„ pellitory	2 "
„ drop lake	$\frac{1}{2}$ "

Mix thoroughly and add—

Oil of verbena	16 drops
„ cloves	16 "
„ lavender	16 "
„ neroli	26 "
„ lemon	32 "

SHAVING CREAM.

THE *Western Druggist* gives the following as being like Bazin's cream:—

	Oz.
Castile soap	1
Rose water	4

Digest on a water-bath, then add oils of almonds and theobroma, each $\frac{1}{2}$ oz., previously melted together, then incorporate, whilst still warm, tincture of benzoin, 1 draehm; oils of rose geranium and bitter almonds, each 5 drops; and glycerine sufficient to bring to the proper consistency.

GLYCERINE SUPPOSITORIES.

THESE are intended to take the place of the small injections of glycerine which have become popular as a remedy for constipation. One of the best ways of making the suppositories is to dissolve 10 parts of hard stearin soap in its own weight of hot water, the solution mixed with 90 parts of pure glycerine, filtered, and the filtrate divided into suppositories weighing 26 or 38 grains.

POINTS.

A CORRESPONDENT of the *Western Druggist* states that in compounding ointments containing an undue amount of fluid, aqueous or hydro-alcoholic, he is in the habit of adding powdered soap where apparently not contra-indicated, or sometimes pure wool-fat, both with charming results. Try the effect of wool-fat in making cold cream.

For the water-tap take a largest size white teat, clip off the apex (not too much), and attach to your hydrant faucet—presto! A nice stream of water, and no more sputtering and splashing when cleaning bottles.

LANOLIN IN MAKING SUPPOSITORIES CONTAINING EXTRACTS.

IN making suppositories containing extracts, lanolin facilitates operations in a remarkable degree, especially when these extracts are soluble in water. The same remark applies to all other substances soluble in that liquid. The following is a formula devised for its use by M. Brontin, and published in the *Bulletin Commercial*. For convenience the extract of witch-hazel is used as an illustration:—

Extract of hamamelis	30 grs.
Lanolin	150 "
Cacao butter	3 oz.

Warm the extract with water sufficient to dissolve it. When solution is complete, mix with the lanolin by thorough trituration, and then work in the cacao butter. Divide into twenty-five suppositories.

The mass will be found to be perfectly homogeneous, and much time and labour will be saved.—*National Druggist*.

[It will be noticed that the suppositories are unusually large.—ED. C. & D.]

THE PREPARATION OF MEDICATED WATERS.

MR. J. G. BENEDICT speaks unfavourably in the *Druggist's Circular* of the U. S. P. method for preparing medicated waters; it is a tiresome process, and for that reason many have gone back to the old magnesia method. He commends the following plans:—Take a medium-sized filter-paper, fold it and then drop the pharmacopœial amount of the oil on the paper near the point of the filter, while in a folded condition, and allow it to partly dry. Enclose this filter in a second one of the same size (or larger if desired) and place in the funnel; then pass the water through the double filters, returning it two or three times, or until you are satisfied the water has taken up all the oil it will. For camphor water wet the filter thoroughly with spirit of camphor and allow the alcohol to evaporate; then enclose in a second filter and proceed as outlined for other waters. The results obtained from this method of manipulation have been all that could be desired in point of stability, clearness, aroma, and rapidity.

DIVISION OF POWDERS.

IN the "Art of Dispensing" this sentence occurs:—"In dividing powders weigh each one." This piece of advice is considered by some to lean to hyperexactitude. The reason for giving the advice was that there are few who really succeed in accurately dividing powders by aid of the eye, and we observe that Messrs. Hiss and Galloway, two Illinois pharmacists, have recently been securing experimental proof of the assertion. Of the methods of division, they state that the most common and the most crude is to spread out a number of suitably-sized papers corresponding to the number of powders to be dispensed, and taking from the mass by means of a spatula or eard a quantity of powder, placing this upon one of the papers, repeating this manoeuvre for a second paper, and so on until all the powder is consumed. In this case the eyesight serves as the only criterion of accuracy. A second and better method is to place the entire mass of powder upon a paper or tile, form it into a rectangular figure of uniform thickness by the aid of a spatula, marking off and dividing this figure into a number of smaller rectangles equivalent to the number of powders desired; lastly, removing these smaller figures to the respective papers. A number of students using these methods had 100 grains of salicin given to them to be divided into ten powders. In determining the weights of these, three were selected from each lot of ten and weighed. The variation ran from 8 grs. to $13\frac{1}{2}$ grs. Of powders selected, one weighed 8 grs., two $8\frac{1}{2}$ grs., one $8\frac{3}{4}$ grs., six 9 grs., two $9\frac{1}{2}$ grs., five $9\frac{1}{4}$ grs., two $9\frac{3}{4}$ grs., three 10 grs., one $10\frac{1}{4}$ grs., five $10\frac{1}{2}$ grs., one $10\frac{3}{4}$ grs., five 11 grs., two $11\frac{1}{4}$ grs., one $11\frac{1}{2}$ grs., one $11\frac{3}{4}$ grs., one $12\frac{1}{2}$ grs., and one $13\frac{1}{2}$ grs. Consequently they come to the conclusion that the most rational and accurate method of dividing powders is to weigh the amount required for each individual powder.

AN American journal, in recording the death of a very old botanic physician, states that "he was of Quaker extraction, and incurably honest."

THE DRUG TRADE AND THE RAILWAY RATES REVISION.

MEETING AT THE LONDON CHAMBER OF COMMERCE.

A MEETING of wholesale drug and chemical firms was held at the offices of the London Chamber of Commerce on Tuesday, under the auspices of the Chemical Section of the Chamber, to consider the proposed revision of railway rates. Mr. Thos. Tyrer, of the firm of May & Baker, occupied the chair, and there were also present the following gentlemen:—Thos. Barclay (Southall Bros. & Barclay, Birmingham); Richard Barron (Barron, Harveys & Co.); A. C. Bishop (Kemball, Bishop & Co.); S. B. Boulton (Burt, Boulton & Haywood); C. R. Harker and S. R. Collis (Harker, Staggs & Morgan); Thos. Christy; W. H. Francis (Hearon, Squire & Francis); F. Freeman; D. W. Greenhough; J. C. Hart (Jas. Jackson & Co.); Arthur B. Hill; Chas. Hodgkinson (Hodgkinson, Treacher & Clarke); David Howard and John Hodgkin (Howards & Sons); C. W. Hovenden; F. Harwood Lescher and E. W. Webb (Evans, Lescher & Webb); Meggeson & Co.; J. Pierre Morson and R. Taubman (Morson & Sons); A. C. Oldfield (Oldfield, Pattinson & Co., Manchester); H. Potter (Potter & Clarke); Alfred Preston (Thos. Hodgkinson, Prestons & King); Fred. Shaw; J. M. Steel; Wm. Thorp; Chas. Umney (Wright, Layman & Umney); T. H. Williams (Idris & Co.); J. A. Wink; Geo. S. Woolley (Jas. Woolley, Sons & Co., Manchester); F. W. Wyley (Wyleys & Co., Coventry); and Robt. Yates (Davy, Yates & Routledge).

The CHAIRMAN commenced the proceedings by reading the circular convening the meeting, and then called attention to a table which had been prepared by Mr. Umney, for the purpose of showing some of the most notable differences between the old rate and the new maximal charges proposed by the companies. (An abstract will be found on page 375.) This table, said the Chairman, showed in the plainest manner possible what an enormous influence the new rates, supposing they were sanctioned, would have upon their trade. He thought that the most effective way for the meeting to proceed would be, after full discussion of the points under consideration, to adopt one or more resolutions similar to those which had already been passed at meetings of other bodies, so as to obtain a harmonious, and consequently more effective, action. It was possible, of course, for any private firm or individual to make suggestions and representations to the Board of Trade on their own account, but he was sure that the meeting would appreciate the difficulties in the way of such individual action. The railway companies were powerful antagonists, and could command the services of the highest forensic talent in their defence, and united action was, therefore, absolutely essential to success. The question of railway rates revision deeply affected the pocket of every merchant and manufacturer. Almost every other interest had been brought into touch with modern progress and modern ideas; the railway interest alone adhered like an octopus to its antiquated habits and ways of doing business. The Chairman then called upon Mr. Francis to make a statement, and congratulated the meeting upon its good fortune in being able to command the services of a gentleman who had for many years made a special study of railway tariffs and charges.

Mr. W. H. FRANCIS mentioned that it had been his experience that the railway companies were always most eager to take advantage wherever they saw their way to do so, but his firm had shown them that their accounts were being very carefully checked, and they now found that some of the companies had much improved in their way of transacting business. He had found that it was the practice of some of the companies to pay the weigher of the goods according to the total weight declared by him, thus making it to their employes' interest to charge for the highest possible weight. Under the proposed new maximum tariff the tonnage rate of all, or nearly all, the companies had been greatly advanced, and for "smalls" they now proposed to demand double the mileage rates of the fifth or highest class, plus double the terminal rates. He should be glad to hear the opinions of members of the trade on these demands.

Mr. CHARLES UMNEY expressed his gratification at seeing present so large and representative a gathering of the wholesale trade, both from London and from the country, which

latter was as much interested in the question as they were in the metropolis. The proposed new classification and charges were undoubtedly a great attempted abuse of power. Mr. Francis had sent round to the members of the trade a circular, which would show them some notable cases of hardship. They had only taken as examples a few lines having termini in London, and had taken no account of the Northern lines, although the advanced rates proposed by the latter were quite as heavy as on the southern system. They would see that, according to "alterations" (page 375), such articles as honey, argols, tartaric acid, vaseline (which formerly as "petroleum grease" was admitted in Class III.), and glycerine in carboys had all been placed in higher classes. But the most important alteration proposed was that affecting drugs in hampers. He need hardly remind the meeting that nine-tenths of a wholesale druggist's home orders consisted of drugs in hampers, and the alteration under this head would therefore affect their interests most injuriously, and if they allowed the railway companies to obtain the power they sought for, they would all live to regret it. Then there were other articles which were now classed definitely, but which under the new rules would be withdrawn from classification altogether, such as cod-liver oil, cocoanut oil, &c. These articles would also all be advanced. But he thought they would do wise not to dispute too many points, but to concentrate the whole power of their attack upon the clause affecting drugs in hampers, and one or two other leading points, as otherwise there would be great danger that they should fail altogether. As regards haulage, all companies, the South-Eastern Railway excepted, go on almost the same lines. In these haulage rates there are many illogicalities; but he did not want to raise serious complaint on this point. The question of the terminals, however, was a much more important one. They would see that the terminal charge for goods in Class V. was to be 5s. 6d. per ton for large towns, and 4s. at any other town. The charge would be applied at both ends of the journey; and goods sent from London to, say, Birmingham, would, therefore, be liable to 11s., and to a smaller place to 9s. 6d. per ton for terminals. In the clauses relating to "smalls," the iniquity of the proposed new arrangement was revealed most glaringly. "Smalls," which were now defined as consignments under 560 lbs. (to be brought down to 500 lbs. under the new scheme), would be liable to double the entire charges for haulage, terminals, and service, the latter including storing, uncovering, &c. They would readily see that here a most formidable ground for objection could be raised. As reasonable men they admitted that they could not expect the railway companies to carry small parcels of goods at the exact fractional cost of large consignments, but the addition now proposed was much too great. At present a fairly just system prevailed, under which "smalls" paid an advance over other goods averaging 14 per cent. on a 30s. rate, 13 per cent. on a 40s. rate, 11 per cent. on a 50s. rate, $8\frac{3}{4}$ per cent. on a 60s. rate, and $7\frac{1}{2}$ per cent. on a 100s. rate per ton. To such a reasonable charge no objection would be raised, but an offhand doubling of the rates all round ought not to be permitted. The speaker thought that it would be fair to pay, say on a 60s. per ton rate, 5 per cent. advance on a 5-cwt. hamper, $7\frac{1}{2}$ per cent. on a 4-cwt., $12\frac{1}{2}$ per cent. on a 3-cwt., and 20 per cent. on a 1-cwt. hamper. The proposed new treatment of empties also left much to be desired, but it would probably not be politic to attack the railway interest on more than one or two exceptionally unjust points, such as the raising of the classification for drugs.

The CHAIRMAN wished to remind the meeting that the definition of goods under Class V. was of a most sweeping character, and included every article not specially provided for, or which might be open to doubt.

MR. RICHARD BARRON thanked the Chemical Section for their courtesy in inviting his firm and others outside the organisation of the Chamber of Commerce to the meeting, and agreed that the questions under discussion were of the highest importance. If he had not been invited here he himself would have taken steps to summon a meeting of the wholesale drug trade, for the purpose of appointing a committee and sending a deputation to the Board of Trade. He entirely agreed with Mr. Umney, and thought that the matter not only affected the wholesale firms, but was also of vital interest to retailers in the country who paid carriage on their goods and returned the empties; and it behoved

them to look after the interests of such customers also. He suggested that resolutions should be framed asking in the first place for an extension of the period for objection, and, secondly, to provide for the appointment of a sub-committee to consider and thresh out the whole question, and then advise the trade at large. A small committee would be much more likely to discuss the questions involved properly and efficiently than a large meeting like the present. If anyone would propose such resolutions he should be happy to second them.

MR. GEO. S. WOOLLEY called attention to the fact that as far back as 1871, after a period of unusual inflation of trade in this country, the railway companies had taken advantage of the satisfactory state of business generally to advance the rate of drugs in hampers by 2s. per ton, and transferring them from Class III. to Class IV. Since then trade had fallen off, prices all round had declined, yet the railway companies had not reduced their tariffs, and now they even wanted to advance them again enormously. He did not agree with Mr. Umney, and did not see why they should pay any advance whatever. (Mr. Umney: That is just my view.) He thought the trade could make out a very good case, and thought they should offer themselves for examination by the Board of Trade. The new classification had not been made on any intelligible principle. Musical instruments, empties, quicksilver, stained glass, dead horses, and other articles, were all placed in the same class, and a consignee would be charged as much for a 12-cwt. piano as for 13 bottles of quicksilver, of equal weight as the piano, but occupying only 5 per cent. of its space, and much less liable to injury or loss in transport. He considered the whole of the railway proposals an outrage, and believed that the matter only wanted to be laid properly before the Board to secure the rejection of the whole scheme. The examples quoted by Mr. Umney could be matched in the North. Goods which now paid 8s. 4d. from Manchester to Oldham would be charged 15s. in future, from Manchester to Birmingham the rate of 33s. would be raised to 50s., and from Manchester to Leeds from 25s. to 30s. per ton.

A gentleman called attention to the fact that the London and North-Western Railway in their revised parcels rates, which had been put into operation already, specifically charged 50 per cent. more for bottles containing medicines than for any other bottles. He thought this point also required looking into.

MR. F. W. WYLEY thought that there would be a unanimous feeling in favour of insisting upon the reduction of drugs in hampers from the fifth to the sixth class as the first line of attack, especially because in the present time, trade being so slack, the weight of consignments of drugs in hampers was generally below 500 lbs., and the difference between double the fourth or the fifth class rates would be considerable. The question of the empties Mr. Wyley considered a ticklish one to attack, because of the undoubtedly large proportion of breakage in empty goods returned from the country, where they were frequently packed by inexperienced men. He would like to hear the opinion of the meeting as to the manner, whether by counsel or otherwise, in which the Board of Trade ought to be approached.

MR. F. HARWOOD LESCHER, as representing both a London and a Liverpool firm, thoroughly agreed to that. Now was the time for action. They should come to an agreement among themselves as to what they were going to say to the Board of Trade. He thought that such questions as the raising of the rate for drugs in hampers had better be thrashed out by a sub-committee, which could more easily and efficiently discuss such matters than a large meeting like the present. The railway companies evidently believed all drugs to be of the highly valuable character of morphia, opium, and the like. Now he had caused the whole of a day's orders received by his firm to be valued according to their weight, and he found that the average value was only 76s. per cwt. He thought that this was a very strong argument for keeping drugs generally in the class to which goods of such an average value properly belonged. His partner, Mr. Webb, had also drawn his attention to another strong point in their case, viz., that a large variety of articles usually included in assorted drug orders already occur by themselves in other classes. Thus in Class I. he found thirty-four, in Class II. twenty-five, and in Class III. seventeen articles which were frequently ordered by his firm's

customers in a general order. Was it fair that goods such as these should be lumped together in Class V? No, that class was not a good one for such articles; they ought to be put in Class III., and if that were done he should not feel dissatisfied. (Laughter.) He cordially agreed with the proposal to refer these matters to a sub-committee.

MR. CHARLES HODGKINSON said that, speaking for his firm, their claims for breakages were very few, and he suggested that it would be useful if a number of firms were to make up a statement of the percentage of breakages on their total consignments during a definite period.

MR. CHARLES UMNEY thought it was quite clear that the companies had no idea whatever of the nature of the goods which they had classified so arbitrarily. Drugs in casks were still left in Class III., but in cases and hampers they had been transferred to Class V.

The CHAIRMAN explained that the other day he had pointed out that very discrepancy to two officials on the Great Western and Midland lines whom he chanced to meet. Both replied that it would be very easy for the druggists to pack their goods in casks instead of cases or hampers, and that thus the difficulty would be solved.

MR. THOMAS BARCLAY said action should certainly be taken at once, and only in co-operation with other interests could they hope to break the back of this proposed extortion. He did not think that they should allow the companies to advance their charges by anything at all. The whole system of railway rating in this country was wrong. The matter should be looked at from a Radical standpoint, and the only solution would be found in the taking over of the railways by the State. At present three competing lines run trains between London and Birmingham, often at the same time, and with half-filled carriages, the resulting waste in the cost of running the trains, wear and tear of stock, labour, &c., being enormous, and falling entirely upon those who used the lines. Government control alone could prevent such waste. Then the charges for carrying goods were excessive. Some articles could be conveyed as cheaply from New York to Chicago, a distance of about a thousand miles, as from London to Manchester. He approved of the appointment of a committee, which should be left as free a hand as possible. Drugs and medicines being absolute necessities to the people should be taxed as low, instead of as high, as possible. The trade should not be taken in by the assertion of the companies that they only wanted maximum charges fixed for a theoretical purpose, that those rates would never be applied in reality at all, and so forth. If they once gave them the power to charge maximum rates, those rates would undoubtedly be applied, even at the cost of strangling trade.

MR. S. B. BOUTON, as representing another branch of the chemical trade (tar-distilling), wished to know whether it was intended to only form a committee of the drug trade, or to represent other chemical trades as well. His own branch, with that of the aniline and alizarine makers, would hold a meeting on this subject on Thursday, and he thought it would be well if they were to join hands for mutual assistance.

MR. ALFRED PRESTON believed it would be impossible to mix up different trades and sections in this way. The interests of the branch represented by the last speaker were so entirely different from those of the druggists that common action would almost be impossible. Some years ago, when the wholesale druggists commenced the system of paying carriage on all orders, they inaugurated a most suicidal policy. He was not prepared to say whether that foolish policy could now be remedied, but it was an instance of the difference in the character of the questions affecting the various branches, which would come up for discussion at the sub-committee, and it showed that it would be in the interest of all sections to take separate action. He believed that by doing so they could bring to bear upon the Government far greater pressure than would otherwise be possible.

The CHAIRMAN did not agree with the suggestions which had been thrown out, that an extension of time for objection should be asked for. The President of the Board of Trade, in answer to a question put to him in the House of Commons on Monday night, had stated that an extension of time would render it impossible to pass any provisional order into law during the present session. He also thought that while there was no objection to the appointment of more than one sub-committee to represent various interests, yet united action

should be taken as a result of the deliberations of these sub-committees. He understood that Messrs. John Richardson & Co., of Leicester, and others, had received numerous letters from their friends in the country, approving of the organisation of opposition, and promising pecuniary assistance. He thought that the Chamber of Commerce deserved the thanks of the trade for the initiative they had taken. The Chamber had entered upon this struggle without funds or backing-up of any kind, and any of their friends who approved of its action could not do better to signify that approval than by joining the chemical section of the Chamber. The Chairman then moved, and Mr. Alfred Preston seconded, the first resolution, declaring:

That this meeting of the Chemical Section of the London Chamber of Commerce, having considered the classifications and schedules of rates deposited by the chief railway companies having termini in London with the Board of Trade, in accordance with Section 24 of the Railway and Canal Traffic Act, 1888, unanimously protest against the increase of maximum rates which, in the majority of instances, is sought to be imposed, as being contrary to the spirit and intention of that Act.

This resolution was unanimously adopted, whereupon the Chairman proposed the second resolution:—

That the terminal charges which the railway companies propose to add to their maximum rates are most excessive and unfair, and that (1) station terminal charges should not be allowed in any case; (2) there is nothing in the companies' schedules to denote that terminal charges would not be imposed in cases where all or part of the terminal accommodation and services were provided or performed by the trader; (3) the amount attributable to each of the items comprised in the definition of terminal services should be specified in accordance with the Act (Section 24, subsection 1).

Mr. RICHARD BARRON, while disclaiming any intention of opposition to the resolution, rose to suggest whether it would not be preferable that all the subjects referred to therein should be left to the consideration of the sub-committee. Supposing that committee, after going thoroughly into the matter, were to disagree with one or the other of the clauses of this resolution, would it not be regrettable to have to call the trade together again for the purpose of rescinding that clause? Let the sub-committee go into all the details, and a meeting of the whole trade be afterwards called to consider their report and take further action.

Mr. DAVID HOWARD (who had just arrived) explained that the Chamber had obtained from the Board of Trade a certificate of *locus standi*, which would enable them to appear and plead in their corporate capacity. He thought that the classification question was their strongest point, and that it would be advisable if they were to agree to guarantee a reasonable fee for the purpose of engaging counsel. With their case well got up and ably represented they were bound to win, but if they entered the lists separately or with an imperfectly considered case, to be bullied and given a bad quarter of an hour by the representatives of the railway interest, they would find themselves in an awkward position.

The meeting agreed to the withdrawal of the proposed second resolution, and Mr. RICHARD BARRON then proposed:—

That this meeting, representing the wholesale drug and chemical trade of London and the provinces, thinks it advisable that a sub-committee of members of this Chamber, with power to add to their number, be appointed to thoroughly investigate the railway revision rates, and to act as they think best without delay.

This was seconded by Mr. Charles Umney, and unanimously agreed to, it being also decided, at the suggestion of Mr. S. B. Boulton, to appoint two sub-committees, one for the wholesale drug trade, and one for the allied chemical trades. The following gentlemen form the sub-committee of the wholesale drug trade:—Messrs. Thos. Barclay, Richd. Barron, W. H. Francis, David Howard, F. Harwood Lescher, Chas. Umney, and F. W. Wyley; while the sub-committee of the allied chemical trades is composed of—Messrs. S. B. Boulton, Christopherson, Walter Crook, D. W. Greenhough, David Howard, J. M. Steel, and Wm. Thorp.

The first meeting of the sub-committee of the drug trade will be held at the offices of the Chamber on Monday, March 18, at 2 P.M. A vote of thanks to the chairman closed the proceedings.

Proposed Increase in Railway Maximum Charges for Drugs and Chemicals, not Dangerous, Corrosive, or Explosive, under the Railway and Canal Traffic Act, 1888, now under Consideration at the Board of Trade. Abstract of the Table submitted at Tuesday's meeting:—

		* Present Maximum Rates		† Rates for Actual Carriage		
		Per Ton per Mile		Per Ton per Mile		
		Classes 3 & 4	Class 5	Class 3	Class 4	Class 5
L. & N. W. R. .	Under 50 miles ..	d. 3	d. 3½	Under 20 miles	d. 3½	d. 4
	Over ..	2½	3	Next 20 "	3½	3¾
				Next 20 "	3	3½
				Over 60 "	2½	3
G. N. R. .	Under 50 miles ..	3	3½	Under 10 miles	3½	4
Leeds, Bradford, & Halifax Branch..	Over ..	2½	3	Next 20 "	2½	3½
		3½	4½	Next 20 "	2½	3
				Remainder	1½	2
M. R. .	Under 40 miles ..	3½	3½	Under 10 miles	Same as G. N. R.	
	Over ..	3	3	Next 20 "		
				Next 20 "		
G. E. R. .	Any distance ..	2½	4	Remainder	G.	N. R.
G. W. R. .	Under 50 miles ..	3	3½	Under 10 miles	4	4½
	Over ..	2½	3	Next 20 "	3½	4
				Next 20 "	3	3½
				Over 50 "	2½	3
L. & S. W. R. .	Any distance ..	3	5	Under 10 miles	4	4½
				Next 20 "	3½	4½
				Over 20 "	3½	4
L. B. & S. C. R. .	Any distance ..	3	4	Same as L. & S. W. R.		
L. C. & D. R. .	Any distance ..	4	4			
Sittingbourne and Sheerness Branch ..		4½	4½	" " " " "		
S. E. R. .	Any distance ..	Such reasonable charge as the Company may think fit		" " " " "		

* SMALL CONSIGNMENTS (*under 560 lbs.*).—At the present time, in about 80 per cent. of Railway Acts of Parliament there is no restriction in rates for packages or consignments called "smalls," under 500 lbs. weight. An increased charge of about 9½ per cent. on old rates was imposed in 1877, and is still in force. What is proposed now by the London & North-Western Railway is double the maximum rates for conveyance, and double the terminal charges authorised in respect of merchandise comprised in the 5th class of the classification, with a minimum charge as for 28 lbs. The G. W. R. adopts this also, but fixes the minimum at 56 lbs. The G. N. R. and other railways named in the table will charge "such reasonable sum as the company may think fit."

† TERMINAL CHARGES must be added to these sums. These charges have previously been an unknown amount, and it is a disputed point whether they are legal or not. The following are the charges which are proposed by all the railways. Large towns as defined are, we may add, for L. & N.-W., M., and G. W.:—London, Liverpool (including Bootle), Manchester (including Salford), and Birmingham. For all other railways, London only.

Large towns as defined			At any other station		
		Per ton s. d.			Per ton s. d.
Class A ..		0 8	Class A ..		0 6
" B ..		1 0	" B ..		0 9
" C ..		2 0	" C ..		1 6
" 1 ..		3 6	" 1 ..		2 6
" 2 ..		3 9	" 2 ..		2 9
" 3 ..		4 0	" 3 ..		3 0
" 4 ..		4 9	" 4 ..		3 6
" 5 ..		5 6	" 5 ..		4 0

ALTERATIONS IN CLASSIFICATIONS.

From Class 1, antimony regulus to Class 2.

From Class 2, arsenic acid, argols, glycerine (in casks and drums), gums, magnesia carbonate, tow, twine, and vaseline (in casks) to Class 3. Annatto (in casks) to Class 4.

From Class 3, aloes, honey (in casks or tins in cases), lac, castor and olive oils, oleic and tartaric acids to Class 4. Ammonia liq. (in bottles in baskets), glycerine (in cases or boxes), and hops to Class 5.

From Class 4, albumen, ammonia liq. (in hampers), drugs (in boxes, crates, and hampers), glycerine (in crates, hampers, and basketed tins), and isinglass to Class 5.

The following articles are not now specifically mentioned, but are included in the classes of goods named:—

As drugs, Class 3, alkali, camomiles, collodion and pimento.

As oils, Class 2, cocoanut, lead, colza, cotton-seed, and linseed oils.

As dyes, Class 4, cudbear.

As sauce, Class 3, ketchup.

EMPTYES.

The carriage of all returned empties must be prepaid. The present general scale of charges for the conveyance of empties to and from London is for distances not exceeding 25 miles, 6*d.* per cwt.; 26 to 50, 8*d.*; 51 to 100, 1*s.*, and 3*d.* per cwt. additional for each 50 miles up to 300 miles, then 3*d.* more per 100 miles up to 500 miles. The charge for 501 to 600 miles is 3*s.* Minimum weight $\frac{1}{2}$ cwt., minimum charge 6*d.* up to 25 miles, and 8*d.* above 25 miles.

For all stations except London the charge is 25 miles, 4*d.* per cwt.; 26 to 50, 6*d.*; 51 to 100, 9*d.*; and for greater distances the same as for London. Minimum weight $\frac{1}{2}$ cwt., minimum charge 4*d.* up to 25 miles, and 6*d.* above 25 miles.

Exceptions.—Sacks, not exceeding 100 miles, 3*d.* per cwt.; 300, 4*d.*; and above 300, 6*d.*, station to station. Minimum charge as for 1 cwt.

Casks, crates, and cases, containing straw—Class 4, minimum charge 1*s.*

Empty carboys, whether in tubs or baskets, at owner's risk only:—Not exceeding 50 miles, 2*d.* each; 100, 3*d.*; 150, 4*d.*; and above 150, 6*d.*, station to station. According to the new classification, empty cases, casks, crates, hampers, and other empties, are included in Class 5—that is, the same rate as drugs.

Mr. Umney's Table.

Railway	Town	Distance, in miles, from London	Present Rates for Drugs in Hampers, and other goods in Class IV. per ton (inclusive of Collection and Delivery)	Proposed maximum Rates for Drugs in Hampers, and other goods in Class V. for consignments under 60 lbs. in weight (exclusive of Collection and Delivery)
L. & N. W. R.	Northampton	66	s. d. 27 6	s. d. 67 6
	Shrewsbury	163	60 0	124 0
G. N. R.	Peterborough	76	35 0	65 4
	York	188	45 0	121 4
Midland	Kettering ..	72	30 0	63 4
	Leicester....	99	40 0	77 0
G. E. R.	Ely	72	35 0	63 4
	Lowestoft ..	117	45 0	83 0
G. W. R.	Barnstaple ..	107	55 0	89 0
	Swansea	204	52 6	145 6
S. W. R.	Portsmouth	74	30 10	78 10
	Wareham ..	123½	35 0	118 2
L. B. & S. C. R.	Brighton....	50½	26 3	59 10
	Hastings....	71½	33 4	77 2
L. C. & D. R. ..	Gravesend ..	27½	16 8	41 6
	Whitstable ..	60	24 7	67 6
S. E. R.	evenoaks ..	20	17 1	35 8
	Ramsgate ..	79	25 3	82 8

EXPLANATION.

"*Small's.*"—For consignments under 500 lbs. in weight the railway companies now charge an average advance of about 15 per cent on the "old rate" column; that is, if package

weighs 4 cwt. instead of 500 lbs., then 6·5 per cent. extra is charged: if 3 cwt., then 8·5 per cent.; 2 cwt., 12·5 per cent.; 1 cwt., 25 per cent., or thereabouts (on a freight of 40*s.* ton). The G. W. R. and the L. & N. W. R. are the only two companies who state their maximum rates for smalls, but in the preparation of these tables it has been assumed that the other companies will not charge more than the rates claimed by these two, viz., double mileage rates and double terminal charges.

Collection and Delivery.—The old rates do, but the new rates do not, include collection and delivery.

Special Charges.—It is still open to the companies to make additions to these rates under the head of special charges.

PROTESTS FROM KENT.

On Saturday afternoon a large number of those interested in the chemical, drysaltery, drug, and other trades was held under the presidency of Earl Sondes, at the Guildhall, Canterbury, to consider the railway rates question. Mr. Edward Clements, secretary to the Railway and Canal Traders' Association, explained the steps which would be taken in order to bring the resolution of the meeting before the Board of Trade. Mr. B. F. Geagh, chairman of Foster's Carriers Company, followed, and showed how the new classification would influence the charges on the more common merchandise. Drugs, he estimated, would be charged 35*s.* 10*d.*, as against 27*s.* 1*d.*, the present charge. After the whole matter had been thoroughly discussed, the meeting resolved to protest against the increase of the maximum rates and the terminal charges, and call for clearer definitions.

SCIENTIFIC NOTES.

PREPARATION OF IODOFORM.

SUILLIOT AND RAYNAUD make iodoform from acetone by taking a solution containing 50 parts potassium iodide, 6 parts acetone, and 2 parts sodium hydroxide in 1 or 2 litres of cold water. Into this they pour, drop by drop, and with constant stirring, a dilute solution of sodium hypochlorite. Iodoform is quickly produced and precipitated. Further additions of the hypochlorite are made until all the acetone or all the iodide has disappeared.

ATROPINE AND HYOSCYAMINE.

LADENBURG has followed up the statement made by Will in regard to the convertibility of hyoscyamine into atropine, and from his results he concludes that atropine is an optically inactive base, standing in the same relation to hyoscyamine as racemic acid to levotartaric acid, and that the conversion of hyoscyamine into atropine, although possible, has not yet been accomplished. He also found that when atropine aurochloride, prepared from ordinary atropine, is recrystallised many times, small quantities of the hyoscyamine salt are obtained, and he is also of the opinion that the supposed conversion of hyoscyamine into atropine results from the employment of impure materials.

TESTS FOR QUININE.

LENZ, in criticising the more important methods for testing sulphate of quinine, states that Dr. Vrij's chromate process gives very varying results, but on the average gives the highest yield of cinchonidine, especially with the purer samples. The oxalate test gives the lowest numbers, but they are more concordant than those of the chromate process. The composition of the by-product is, however, variable. Hesse's bisulphate test gives results varying considerably. The alkaloids in the ethereal solution ought to be submitted to the process a second and even a third time, but even with this improvement the whole of the cinchonidine is not obtained, and the results vary much, but the composition of the by-product is more uniform than in the other processes. Paul's crystallisation test has the same advantages as the bisulphate test if the crystallisation is repeated often enough, and is the process which is least influenced by the presence of hydro-bases. It is, however, tedious.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, at any time within two months of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "*Trade Marks Journal*," March 6, 1889.

- "FRY'S SULPHOKINONE DEVELOPER"; for a developing agent for photographic dry plates. By S. Fry & Co. (Limited), 5 Chandos Street, Charing Cross, W.C. 82,406.
- "PETROBOLIC" and "PETROPHENIC"; for chemical substances, class 2. By F. C. Calvert & Co., Bradford. 81,348, 81,354. The same for soaps, &c. 81,349, 81,355. Also for perfumery. 81,350, 81,356.
- "THE TARGET LITTLE VEGETABLE PILLS" and other wording on label; for pills. By Wride Brothers, 1 Strand, East Street, Southampton. 81,234.
- "METCALFE'S SODA-MINT DROPLETS" and other wording on label; for medicines (excluding ointments, cerates, &c.) By C. L. Metcalfe, 13 Whitefriargate, Hull. 81,954.
- "LIVER SYRUP" and device; for liver syrup. By J. Sutcliffe, 17 High Street, Buxton. 82,857.
- "AMYKOS"; for a medicine. By the Normal Company (Limited), Botolph House, Eastcheap. 83,886.
- "NICHOLL'S KOPNOMOR SPECIFIC" and other wording on label; for a medicine for coughs, &c. By J. W. Nicholl, 25 High Street, Belfast. 84,023.
- "WEEKS'S LIFE BELT" on figure of a lifebuoy; for electric belts for surgical purposes. By H. Weeks, 15 St. Alban's Street, Rochdale. 79,752.
- Figure of St. Paul and wording; for aerated waters. By W. Hodgson, St. Paul Street, Blackburn. 79,808.
- Figure of pick and shovel crossed within circle; for aerated waters. By Havard Brothers, Merthyr. 83,205.
- "APOLLINARIS" on figured strap label; for mineral and aerated waters. By the Apollinaris Company (Limited), 19 Regent Street, S.W. 83,600.
- "ENGLISH" under figure of a crown, and "OVAL BALLS" under figure of a crown; for perfumery and toilet soaps. By W. S. Thomson, trading as "The Crown Perfumery Company," 48 Old Bailey, E.C. 82,950-1.
- "ANTI-STIFF" and other wording on figure of a box; for a preparation for the toilet. By J. Wilson, pharmaceutical chemist, Chislehurst. 83,968.
- "TURNER'S BALL-ROOM FLOOR POLISH"; for a powder for polishing floors. By H. G. Turner, 125 Grosvenor Street, Manchester. 83,522.

From the "*Trade Marks Journal*," March 13, 1889.

- "BAUMOLINE" and signature on label; for an embrocation for horses and cattle. By D. Anthony, 39 St. Mary Street, Cardiff. 80,405.
- "THE HORSE'S REAL APPETISER," figure of a horse-ball and other wording; for a horse medicine. By G. Walker and C. Troke, trading as "Walker, Troke & Co.," 82 City Road, E.C. 81,291.
- "NEWBURY'S ALKALINE LAVENDER," other wording, and picture on label; for a deodoriser. By C. J. Newbury, Old Square, Birmingham. 84,262.
- "THE CHAMBARD" and other French wording on label; for a medicinal preparation. By A. F. J. I. Sicre, 8 Quai de Gesvres, Paris. 66,536.
- "BLOOD ORANGE FOAM" and other wording on device of leaves and flowers; for a tonic and blood-purifying effervescent medicine. By W. White, trading as "Don Zyllvene," 2 Exchange Buildings, East Dulwich Road, S.E. 77,575.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., March 14.

THE week under review is generally said to have been by far the quietest in all departments since the commencement of the year, and there are very few alterations in the drug and chemical markets which call for comment.

In fine chemicals the English makers of quinine have reduced their quotations, quicksilver is somewhat firmer in second hands, and in glycerine the "bear" section appears to have gained some slight advantage. Cream of tartar, cocaine, and camphor appear to be tending just a trifle higher. Sulphate of copper has followed to some extent the downward course of the metal, and chlorate of potash is also weaker. As regards drugs, fresh advances have occurred in copaiba balsam and cascara sagrada, and essential oil of orange is also said to be higher in price, but opium is dull and easier for some varieties, and cod-liver oil is unsettled. The cinchona sales passed off without alteration. In the drysalt market shellac has attracted a good deal of attention, fluctuating almost daily to the extent of 3s. or 4s. East Indian gum arabics are very neglected, Ghatti being decidedly cheaper, while gum olibanum is dearer for the better grades. Cotton-seed oil and palm oil are easier, turpentine firm, pimento and mace dearer, and Zanzibar cloves, Cochinchina ginger, nutmegs, white pepper, and black pepper are cheaper in price.

THE DIRECTOR OF THE GOVERNMENT CINCHONA PLANTATIONS in Java writes that the crop of bark from those plantations during the present year will be exceptionally large, and much in excess of any previous season. He estimates the production at equal to 1,000,000 lbs. English. He also states that while druggists' bark of fine appearance and in good quill fetched comparatively high prices at the Amsterdam auctions in October and November last, the druggists' barks as were unsatisfactory in appearance left a clear loss upon the cost of production.

ONE OF THE RESULTS OF THE FALL in the price of cinchona bark and its products has been that the manufacturers are endeavouring to enter into closer relations with the bark producers, and thus to avoid the commissions now paid to middlemen. At a recent meeting of the Soekaboemi Agricultural Association in Java, for instance, a letter was read from Messrs. Zimmer & Co., of Frankfurt-on-Main, in which that firm expressed its desire to enter into negotiations with cinchona growers for the purchase of their entire production of bark outright, in order to save charges.

ACIDS.—Citric dull at 1s. 4½d. per lb., without much business. Oxalic in very limited demand at 4½d. per lb. Tartaric dull at 1s. 3d. to 1s. 3½d. per lb., according to brand, while for Lawes' make 1s. 4d. is asked.

ALUM has been more inquired for at 5l. 7s. 6d. for loose lump, ground alum being held at 6l.

AMMONIA SALTS.—Carbonate fairly steady at 3½d. to 4d. per lb. Sal ammoniac still moves off at 36s. for first and 34s. for second quality. Sulphate steady and stronger in tone, with a fairly active business; Beckton terms, 11l. 15s.; 24 per cent. grey, 12l.; Hull, 11l. 18s. 9d.; Leith, 11l. 17s. 6d.

ARSENIC.—Very firm at 13s. per cwt. for best white powder, landed.

BALSAM COPAIBA very scarce, and still advancing. For good bright Maranham 3s. 3d. to 3s. 4d. per lb. is required.

BLEACHING-POWDER remains depressed, and is very quiet at 6*l.* 17*s.* 6*d.* to 7*l.* on the Tyne, and 8*l.* to 8*l.* 2*s.* 6*d.* ex warehouse London.

BORAX.—The demand is only moderate at 28*l.* to 28*l.* 10*s.* in second hands, and 30*l.* from the makers.

BROMINE and the bromides are all firm, but unchanged.

CAMPHOR (CRUDE).—The last spot transaction we have heard of was at 90*s.* for Japan, but we understand that 250 tubs February-March steamer shipment have changed hands at 85*s.* "c.i.f." terms, landed weights. A cablegram received to-day from Hong-Kong reports a rising market there.

CARAWAY SEED.—*Dutch* seed is very depressed, and selling very cheaply indeed at 20*s.* to 26*s.*, according to crop and quality. Fine *Russian* may be had in quantity at 19*s.*

CASCARA SAGRADA.—A fresh advance has occurred since our last report. It is certain that 3*s.* 2*d.* per lb. has been paid, and we also hear of a transaction at, it is said, 3*s.* 3*d.* per lb. There does not seem anything offering now under 3*s.* 6*d.* per lb.

CHAMOMILES.—Business has been very quiet this week, and prices remain as last quoted.

CINCHONA.—At Tuesday's auctions a moderate quantity of bark was offered for sale, the East Indian varieties again being almost equal in bulk to the offerings from Ceylon. The catalogues comprised:—

Ceylon bark ..	1,273 packages, of which	1,135 packages were sold		
East Indian bark ..	1,206 "	"	1,161 "	"
Java bark ..	54 "	"	154 "	"
South American bark ..	119 "	"	12 "	"
West African bark ..	7 "	"	7 "	"
Total ..	2,659 "	"	2,369 "	"

Nearly the whole of the supply was disposed of, if not with much competition, at least without a further reduction from the previous auctions' rates, the unit being generally placed at 1½*d.* per lb.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	157,907
" the Auerbach works	86,926
" the Brunswick works	72,235
" the American, French, &c., works ..	63,232
" the Frankfort o/M. and Stuttgart works ..	56,044
Messrs. Howards & Sons	48,568
Mr. Thomas Whiffen	31,476
Sundry druggists	18,122
Total sold	534,570
Bought in or withdrawn	89,102
Total quantity catalogued	623,672

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: yellow varieties—root, 3½*d.* to 4½*d.*; thin twigs and shavings, 2*d.* to 3*d.*; fair spoke shavings, 3½*d.*; rather young and ordinary chips, 2½*d.* to 3½*d.*; red varieties—root, 2*d.* to 3*d.*; spoke shavings, ordinary to good bright, 1½*d.* to 3½*d.*; chips, ordinary to good bright stem, 1½*d.* to 3½*d.*; twigs, 1½*d.*; siftings and dust, 1*d.* to 2*d.*; very ordinary weak quill, 1½*d.* to 3*d.* per lb.; grey and hybrid varieties—chips, 2*d.* to 2½*d.*; spoke shavings, 3½*d.* to 4*d.* per lb. *Renewed*: yellow varieties—ordinary to good fair chips and shavings, 2½*d.* to 6½*d.*; fine bright chips, 7*d.* to 9*d.*; red varieties—chips, 2½*d.* to 6½*d.*; grey and hybrid varieties—shavings, 5*d.* to 8*d.* per lb.

EAST INDIAN BARK.—*Original* yellow varieties.—Thin dull to fair shavings, 1½*d.* to 3½*d.*; branchy chips, 2*d.* to 3½*d.* Red varieties.—Twigs, siftings and dust, 1½*d.* to 2½*d.*; good branch, 4½*d.*; dull to good bright chips, 2*d.* to 4*d.*; shavings, 2½*d.* to 3*d.*; ordinary medium but dull quill, 3*d.* to 5*d.* per lb. *Renewed*.—Yellow spoke shavings, 5½*d.* to 7½*d.* per lb.; red, ordinary to fair chips and shavings, 1½*d.* to 4½*d.*; good to fine bright ditto, 5*d.* to 7*d.* per lb.

JAVA BARK.—Yellow chips, fair to good bright, 2½*d.* to 5*d.*; root, 7*d.*; grey chips, 3½*d.* per lb.

SOUTH AMERICAN BARK.—Of 58 bales *Carthagen* bark only 6 were sold, at 3½*d.* to 4*d.* for partly damaged to sound. A supply of 59 packages cultivated *Calisaya* quills was nearly all bought in, 6 bales, of 100 lbs. each, being sold by private contract.

WEST AFRICAN BARK.—Seven bales, together about 980 lbs., from the island of San Thomé, fair medium to stout brown quill, of *Succirubra* character, partly damaged, brought from 4*d.* to 5½*d.* per lb.; weak damaged ditto, 3*d.* per lb.

The shipments of cinchona from Ceylon during the periods from October 1 to March 4 have been:—1888-9, 5,300,000 lbs.; 1887-8, 3,788,451 lbs.; 1886-7, 6,475,896 lbs.

COCAINE.—Various prices are still quoted for hydrochlorate, from 13*s.* 6*d.* per oz. in bulk upwards. It is stated that the prices at which crude South American cocaine has been lately sold entail a loss of 10 per cent. to the manufacturers.

COPPER (SULPHATE) has declined with the metal, and is now quoted at 26*l.* 10*s.* to 27*s.* on the spot.

CREAM OF TARTAR slightly steadier at 93*s.* to 93*s.* 6*d.* per cwt. for first white crystals spot.

CUMIN SEED.—*Malta* seed remains neglected at the recent reductions, and other varieties, *i.e.*, Morocco and East Indian, are also easier in sympathy.

CUTCH.—At Tuesday's auctions 1,077 boxes were sold without reserve at the following prices:—Ordinary *Double Peacock* tablets, 18*s.* 9*d.* to 19*s.*; ditto *ITC* tablets, 18*s.* 6*d.* to 19*s.*; common *YAU* tablets, 12*s.* 3*d.*; TC block, 10*s.* 3*d.* to 10*s.* 6*d.*; KCB block, 10*s.* to 10*s.* 3*d.* per cwt.

GAMBIER.—The week has been a very dull one, though the article closes somewhat firmer, with business at 26*s.* 6*d.* for *block* on the spot, and 26*s.* 3*d.* for February-March shipment. At the auctions on Tuesday 383 bales *block* sold without reserve at 25*s.* 9*d.* to 26*s.*, "all faults."

GLYCERINE.—Some of the agents say that the article is weaker, but most of them still keep to last week's quotations. The price asked for double-distilled, *s.g.* 1.260, now ranges from 66*l.* per ton upwards.

GUM ANIMI.—A few cases *Zanzibar* sold at steady rates from 12*l.* to 18*l.* 12*s.* 6*d.* for fair red to good bold and medium mixed sorts; 8*l.* 2*s.* 6*d.* to 9*l.* for bean and pea; 43*s.* for siftings; and 55*s.* to 87*s.* 6*d.* for pickings.

GUM ARABIC.—At to-day's public sales there was an almost complete absence of demand, although the quantity of East Indian gums offered was considerably under recent average. *Ghatti* gums were rather forced for sale, the result being a decline of fully 5*s.* per cwt. *East Indian Amrad* sold at 39*s.* to 58*s.* for common brown to fair amber drop, 33*s.* to 45*s.* for fair pale siftings, 25*s.* 6*d.* to 27*s.* 6*d.* for pale dust. *Aden* sorts, strongly olibanum-scented, 80*s.*; *Ghatti*, common dark to fair brown, 26*s.* to 40*s.*; fine clean to superior pale, 65*s.* to 85*s.*; pickings and garblings, 12*s.* to 20*s.* per cwt. Fine *Turkey* gums remain excessively scarce.

GUM ASAFŒTIDA.—The *Amana* has brought us 280 cases from Bombay this week.

GUM KOWRIE.—Of 676 cases a small part sold without quotable alteration in price. Ordinary rough small, 31*s.*; fair brown scraped, 65*s.* to 68*s.*; fair selected amber, 77*s.* to 80*s.*; fine pale, 6*l.*; transparent, 11*l.*; low dark chips, 20*s.* to 21*s.*; fine small, 45*s.*; dust, 25*s.* per cwt.

GUM OLIBANUM.—The 711 packages offered for sale to-day met an exceedingly good demand, and a fair proportion sold at 5*s.* advance on the better grades. Good pale to fine selected drop, 59*s.* to 67*s.*; ordinary dark mixed to medium, 31*s.* 6*d.* to 36*s.*; siftings, common to good, 13*s.* to 20*s.* per cwt.

GUM TRAGACANTH.—At the auctions held last Friday 2,225 packages *Syrian* gum were offered, but they met with no demand, and only a few lots sold, because they were offered "without reserve," at 6*l.* 7*s.* 6*d.* to 8*l.* 7*s.* 6*d.* for ordinary to good seconds, 70*s.* to 5*s.* 5*d.* for ordinary to fine thirds, 85*s.* to 95*s.* for good pinky, 60*s.* to 63*s.* for fourths, 88*s.* for fine siftings, and 30*s.* to 50*s.* per cwt. for pickings.

INSECT-FLOWERS.—There is nothing new to report since last week.

IODINE and all iodides are firm, but without change.

LINSEED.—*Dutch* is very firmly held at 46s. to 47s. per 424 lbs., and there is not over much offering. Fine *Russian* seed is worth 42s. *East Indian* linseed also remains firm.

MAGNESIA SULPHATE.—There has been no further movement in the price of this chemical. The German agents quote 70s. for first crystals in 10-ton lots f.o.b. Hamburg.

MERCURIALS firm on the basis of 3s. 2d. per lb. for calomel.

MUSK.—Four boxes have been received *viâ* Colombo this week, and 1 case *viâ* Calcutta.

OIL (CASTOR).—*Italian* and *French* oils unchanged. There has been some inquiry for good *Calcutta* seconds in Liverpool, and for this quality 3d. per lb. is required. From Calcutta it is reported, under date of February 19, that the production and the supply of seed remain extremely limited. There has been some demand for the oil, but prices remain so high that business is virtually impossible at present.

OIL (COD-LIVER).—The fishing in Lofoden is progressing very unsatisfactorily, and the yield of steam-refined oil, according to the latest reports, is less than one-third of last season's. Yesterday's telegrams report that the bad weather at Lofoden still continues, and that the Søndmøre fishing is also falling off considerably. But the very heavy stock which still remains from previous seasons presses upon the market, and we hear that the dealers who quoted 80s. "c.i.f." terms last week have since sold at 78s. "c.i.f." per barrel.

OILS (ESSENTIAL).—There is scarcely a new feature in this market. *Star anise* is held at 6s. 2d. to 6s. 3d. per lb. on the spot, while China cablegrams quote 6s. 1d. per lb. "c.i.f." terms, steamer shipment. *Lemon* oil is in rather better demand and a little firmer, while *Orange* is reported about 9d. per lb. dearer from Italy.

OILS (VARIOUS).—*Cocoonut* oil has been quite out of demand, and only nominal quotations can be given. Ceylon is held at from 26l. to 26l. 10s., Cochin at 27l. to 28l. 10s., and Mauritius at 26l. 10s. *Cotton-seed* oil has fallen off in price, and closes as follows: Crude spot, 21l. 15s.; refined, 23l. 15s. to 25s. In *Linseed* oil, spot, landed, 18l. 5s. to 18l. 10s.; Hull, naked spot, 18l. In *Olive* oil there is practically nothing doing, Messina being quoted, spot, 34l. to 35l.; Spanish, 35l. to 36l.; and Mogadore, 31l. *Palm* oil neglected, and down to 23l. for fine Lagos. *Petroleum*—American weak, but Russian is a shade firmer. Prices close to-day at 5½d. for American spot, 5¾d. for April-June; Russian spot, 5¾d. *Rape* oil steady; brown spot, 26l. 15s. to 27l.; refined, 28l. 10s. Holders of American spirits of *Turpentine* are firm, and seem to think they will get higher prices by-and-by. The market closes at 37s. spot, 37s. 3d. to 37s. 6d. for April, and 28s. 6d. to 28s. 9d. for September-December.

OPIUM.—A slight business is reported in soft shipping varieties, at 14s. 6d. per lb. for *Malatia*, which is somewhat lower, while for *Tokat* 14s. per lb. is required. Holders of *Persian* are keeping back, but it is doubtful whether they would find any demand if they were to offer, nor is there any inquiry for *Druggists'* opium, of which fine can be bought at 10s. per lb. The reports from Smyrna speak of excellent crop prospects, and this, though it is yet very early in the season, somewhat depresses the market.

POTASH SALTS.—*Bichromate* still held at 4½d. per lb. on the spot. *Chlorate* very dull, and tending easier, at 4¾d. per lb. Yellow *Prussiate* firm at 6¾d. to 7d. per lb., according to brand, while red *Prussiate* is held at 1s. 7d. per lb.

QUICKSILVER.—The market has improved somewhat during the present week, there having been buyers first at 7l. 8s. 6d., but gradually up to 7l. 12s. per bottle for second-hand stuff. Since Tuesday the importers quote 7l. 15s., and to-day second-hand holders are sellers at 7l. 12s. 6d. per bottle. Another consignment of 6,000 bottles has come to land from Spain this week. The stock in London at the end of last month was estimated at 54,000 bottles, against 52,500 the year before.

QUININE.—It is reported that at the end of last week very considerable transactions were made in some German brands at 1s. 2d. per oz. for forward delivery, but we have reason to believe that the quantities named as having changed hands are much exaggerated. At present the market is firm at 1s. 2d. for forward delivery for German bulk, *B & S, Brunswick*, or *Auerbach*. On the spot second-hands lots could no doubt be had at 1s. 1d. per oz. *Howards'* brand has been reduced to 1s. 6d. for bulk, and 1s. 7d. per oz. for vials for large quantities, and *Whiffen's* to 1s. 5d. and 1s. 6d. per oz. respectively. The *Oil, Paint, and Drug Reporter*, which has been interviewing the American dealers on the quinine situation, with the usual result of eliciting a number of irreconcilably different opinions, is responsible for the statement that the Brunswick factory declared a dividend of 40 per cent. last year, and that the owners of another quinine works have expressed themselves as being "perfectly satisfied with the situation." It is understood that the dividend in the first case was made from quinine, and this alleged fact has caused considerable comment in certain circles, where the belief is firmly fixed that all makers are constantly losing money. It is stated that the two bark auctions held this year in Amsterdam represented together about 550,000 oz. quinine sulphate, against about 900,000 oz. for the four corresponding London auctions.

SHELLAC.—The advance reported in our last continued up to the end of the week. On Friday there was a further rise of 3s. to 4s. on second orange, with sales of TN second orange, April delivery, 78s.; May, 78s.; June, 78s. to 78s. 6d.; and July, 78s. to 80s.; and *Garnet AC* April, at 61s. to 62s. 6d. But on Monday a very quiet feeling took possession of the market, and prices were again about 4s. lower. The auctions on Tuesday comprised 1,506 cases, of which 724 sold with very little competition at a decline, the advance as compared with the previous Tuesday being 10s. per cwt. at the close of the sales. The following prices were paid:—*First orange*, H in diamond, dull red, 87s.; *Second orange*, SD in circle, dull, 77s.; good bright reddish, 72s. to 74s.; fair red, 69s. to 70s.; ordinary livery, 68s.; common liver, 60s. to 62s.; *Button*, fine first, 97s.; third, 77s. to 86s. per cwt.

Since the auctions the market has been most unsteady, falling away at first, but closing, among some excitement, late on Wednesday night, at an advance of about 2s. To-day the rise continued, but at the "call" this afternoon the position was duller again, the figures being:—

	March	April	May	June	July
Second Orange TN:—	s. d.	s. d.	s. d.	s. d.	s. d.
Sellers ..	78 0	78 6	79 0	79 6	80 6
Buyers ..	75 0	76 6	77 0	79 0	80 0
Garnet AC:—					
Sellers ..	63 0	63 0	63 0	64 0	—
Buyers ..	59 6	60 6	61 0	62 0	—

Business was done amounting to 600 cases, May, June, and July. The Calcutta market on February 19 was dull and quiet.

SODA SALTS.—*Ash* very steady at 1½d. per degree landed, and 1d., less 2 per cent., on the Tyne. *Bicarbonate* unaltered at 5l. 2s. 6d., ex warehouse. *Caustic* very quiet at 6l. 15s. for cream, and 7l. for white 60 per cent. landed. *Crystals* steady at 47s. to 47s. 6d. here, and 40s. on the Tyne. *Nitrate* remains at 10l. 15s. to 11l. 7s. 6d. for ordinary to chemical quality.

SOY.—At Wednesday's spice sales 111 casks *China* were sold "without reserve" at 1s. 3d. per gallon, which is a very steady price.

SPICES.—The new crop of St. Vincent *Arrowroot* is now being offered, and brings very steady prices, good ordinary to good 2d. to 2½d. per lb. *Cassia lignea* remains very dull and neglected, and we do not hear of any business passing. The demand for Zanzibar *Cloves* improved towards the end of last week, and prices became firmer, fair on the spot selling up to 8½d.; May-June shipment, 8d.; and July-August, 8½d. per lb. But at the auctions the 516 bales offered met a very lifeless market, and about two-thirds were sold at a decline of ¼d. per lb.; ordinary dark to fine bright, 7½d. to 8½d. per lb. Good bold bright Penang sold at 1s. per lb. Our stock of Zanzibar cloves is considerable, 18,182 packages, against 11,032 last year; of Penang there are 834, and of

Amboina 394 packages in first hands. *Ginger*: A good supply of new crop Cochin was partly sold at a decline of about 1s. 6d. per lb.: fair to good bright bold rough, 17s. 6d. to 19s. 6d.; mouldy, 17s. Old crop, small to bold cut, 25s. to 54s.; Jamaica, ordinary Rhatoon, 54s. per cwt. *Mace* has continued to advance, a fair business being reported privately at higher prices, while at the auctions an advance of 1d. per lb. was realised: Penang, ordinary to fair reddish, sold at 2s. 6d. to 2s. 9d.; West India, ordinary to very fine pale, 2s. 5d. to 2s. 10d.; Wild Bombay, common to fair reddish, 7d. to 9d. per lb. *Nutmegs*, after being reported dearer privately from Penang (it is said that 2s. 7½d. was paid on Friday last for 82's), quieted down at the auctions, and only a small quantity was sold: Java, 94's to 105's, 2s. 6d. to 2s. 5d.; West Indian, 64's to 123's, 3s. 4d. to 2s. 3d. *Black pepper* was in rather more request at the beginning of the week, and a very considerable business in fair dusty Atchin on the spot was reported, but soon demand eased off, and only lower rates could be obtained at the auctions. Atchin, common light dusty to good bold sifted, brought from 5½d. to 6d. per lb.; Tellicherry, 7½d.; Singapore, for shipment, February and March, 7d.; March to April, 6½d. to 6½d. per lb. At auction fair to good Singapore brought 7d. to 7½d.; very fine bold Mangalore, 9½d. to 10½d. per lb. Our first-hand stock is 2,421 tons, against 1,948 last year. *White pepper* is also dull and lower: fair Singapore, 10½d. to 10½d.; Siam, 10½d.; fair Penang, 9½d. per lb. *Pimento* advanced until the day of the auctions, good quality going up from 3½d. to 3½d.; at auction ordinary to good clean sold at 3d. to 3½d. per lb. Our stock is now 34,131 bags, against 41,774 last year.

SUGAR OF MILK.—Best powder is now held at 7d. per lb. in casks.

TEA.—The *China* market is distinctly lower for the week, Tuesday's sales showing a quite disorganised market. Dealers are anxious to reduce their stocks, but the country trade gives them but little opportunity for doing so, and, consequently, a considerable amount of Congou being offered in public sale on Tuesday, prices have been very irregular. Several parcels of first crop Moning sold at a sharp decline; good first crop Keemun and Kintuck, worth 1s. 3d. to 1s. 4d. a few weeks ago, only realising 1s. 1d. to 1s. 1½d., and a considerable proportion of the sale being second-hand tea, it was impossible to tell what were *bonâ-fide* prices, and what "went home" again. On the other hand, some teas were knocked down at about recent quotations, and a few lots were withdrawn under reserve. A large catalogue of last season's Kaisow, some very common teas, sold at 4d. to 4½d. and 4½d., being about value. *Assams* are slightly easier for common grades, fair common broken selling at 6d., and common leaf 6d. to 6½d. Some of the Pekoes now selling from 8d. to 10d. are exceedingly good value, and some of the 9d. to 10d. teas show a slight decline from the firmer rates of two or three weeks ago. Really fine teas are very scarce, and any "stand-out" lots of Indian—as of Ceylon—tea are competed for at high rates. Good medium *Ceylons* from 11d. to 1s. are firm to dearer, but teas from 8d. to 10d. still show very good value; and if *China* teas are in the future to be bought on their merits, as compared with Indian and Ceylon growths, we have not yet seen the bottom of the *China* market by a long way.

CHEMICALS IN THE NORTH OF ENGLAND.

THERE has been more activity in chemicals generally, and as the foreign markets, which have been closed by the ice last winter, are now opening, a more important demand, resulting in firmer prices, is expected. There is, however, a peculiar triangular duel going on at present. Combinations in several chemicals, which were to reduce outputs and so cause higher prices, have not been successful, and markets have consequently continued to droop under the pressure of heavy stocks. Speculators who bought last year for an advance are selling out against makers, and makers, in turn, are selling at low prices, partly against each other, and partly as a complimentary return to the speculators. The pace is a severe one, and will ultimately work its own cure; but, meanwhile, all life is taken out of the market, as buyers

who have orders are waiting for lower prices than those ruling.

AMMONIA SALTS.—For *Sal-ammoniac* there has been a better demand, and shipments are increasing in quantity at 36l. for first and 34l. per ton for second quality. *Muriate* has been inquired for, chiefly for export, and prices have been very firmly maintained at 29l. to 36l. per ton, according to quality. For *Carbonate* there has been a very steady inquiry at 3¼d. to 4d. *Sulphate* continues to decline, and so far shows no signs of improvement. The closing quotations are for good grey, Hull, at 11l. 16s. 3d.; Liverpool, at 12l.

ALUM.—A better demand has set in for this article, and orders are coming in more freely. The prices range from 4l. 15s. to 4l. 17s. 6d. per ton, according to packages. *Sulphate of alumina* is also more active at 5l. per ton.

BLEACHING-POWDER is still suffering from over supply, stocks at works heavy, parcels contracted for not having been removed, and the probability is that next month a further reduction of output will be made, which will improve the positions of *Salt cake* and *Caustic soda*. The quotations are: *Softwood* on rails, 6l. 15s.; and *Hardwood* f.o.b. at 7l. 5s. per ton.

BORAX.—There is no change in this article. The official quotation is still 30s. for *Crystals*, but second-hand parcels are offering at irregular prices. The export demand, however, is gradually improving. Of Californian, 60 tons have been sold for the States at 29s. 6d. This is a drop in value, but it proved that the reported rupture of the Californian syndicate is not correct.

METALLIC SALTS.—*Iron sulphate* is very steady at 35s. for Welsh, and 36s. for Lancashire. The substitution of hydrochloric acid in place of sulphuric in several large tin-plate works in Wales is likely to have an important effect upon this article, the supplies of Welsh growing gradually less. *Copper sulphate*, notwithstanding the panic which has taken place in copper during the past week, has been very slightly affected, makers being well sold prompt and forward, and works are bare of stocks. The quotations range at 26l. to 26l. 10s. per ton. *Lead acetates* are steady, but not in much request. Foreign white at 25l. 10s., English at 28l., and Brown held at 19l. 10s. per ton.

POTASH SALTS.—*Yellow Prussiate* has become decidedly firmer, foreign makers having raised their prices, and the closing quotations are now 6½d. to 7d. per lb. *Chlorate* has continued to decline, and is nominal at 5d. per lb., sales having been made both by makers and "bear" sellers under these quotations. *Bichromate* in good demand at 4½d. per lb., but *Saltpetre* is not so active, at 23s. for kegs, and 22s. for barrels.

THE DUTCH MARKET.

AMSTERDAM, March 12.

CINCHONA BARK.—The sales to be held at Amsterdam on March 21 will consist of 1,856 bales and 227 cases; total, about 169 tons, made up as follows:—*Java* bark, from Government plantations, 368 bales and 33 cases; about 33½ tons. From private plantations, 1,434 bales and 194 cases; about 131 tons. *British India* bark, 54 bales; about 4½ tons. There are of *Druggists' Bark*—*Succirubra*, quills, 10 bales 119 cases; broken quills and chips, 316 bales 14 cases; root, 90 bales. C. Schuhkraft, quills, 15 cases; broken quills and chips, 29 bales; root, 27 bales. *Manufacturers' Bark* (about 137 tons): *Officinalis*, broken quills and chips, 34 bales; root, 9 bales. *Ledgeriana*, broken quills and chips, 952 bales 68 cases; root, 265 bales 11 cases. *Hybrids*, broken quills and chips, 84 bales; root, 40 bales. The manufacturers' bark contains about 5¼ tons of sulphate of quinine, or 3.82 per cent. on the average. About 16 tons contain from 1 to 2 per cent. of sulphate of quinine; 33 tons, 2 to 3 per cent.; 47 tons, 3 to 4 per cent.; 12 tons, 4 to 5 per cent.; 11 tons, 5 to 6 per cent.; 7 tons, 6 to 7 per cent.; 7 tons, 7 to 8 per cent.; 4 tons, 8 to 9 per cent.

CUBEBS.—A small lot of 4 bales good genuine berries, recently imported, was sold to-day at 3.25f. per ½-kilo. = 27l. per cwt. The new crop has been bought up in Java for American account at very high prices, and it is generally believed that this year's crop will again be a small one.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

The Tinctures Drawback.

SIR,—You will, no doubt, remember my letter, which you so kindly published in the latter part of 1886, suggesting that the Excise authorities should be asked to allow a drawback on the exportation of perfumes made with duty-paid spirit. This called forth further letters from one or two eminent firms, and, I presume, jointly with these latter, had somewhat to do with the movement of the sub-committee of the chemical section of the Chamber of Commerce, which has so successfully resulted in the Inland Revenue order published in to-day's issue. On the strength of this, I beg to ask you to draw the attention of these gentlemen and the trade generally to the fact that it is hardly fair that this advantage should be granted only to one section of spirit-users. If granted to makers of medicinal preparations, why not to makers of perfumes? They are both equal as traders, both pay the same taxes, and therefore ought to have the same facilities for competition with foreign manufacturers. In your article on the subject, dated August 6, 1887, you say:—

“The scheme makes no mention of articles of perfumery; but the authorities, if they can see their way to adopt the facilities suggested with regard to tinctures and other medicinal preparations, cannot certainly object to extend the same boon to manufacturers of perfumery.”

I will ask you to again bring forward this argument, and also to suggest that in the case of perfumery a smaller bottle than 1 gill ($\frac{1}{4}$ pint) be adopted for the minimum—say, 1 or 2 oz.—as a larger sized bottle than these latter would be a great stumbling-block to makers of many popular articles.

Yours faithfully,

Pulborough, March 9.

W. T. MADDOCK.

Green “Euonymin.”

SIR,—I have recently examined a sample of “euonymin,” which apparently is the same as that referred to by Mr. H. Collins, and I can confirm the results published by him in your issue of last week. I was much astonished to find only 1 per cent. of ash ($\text{SiO}_2, \text{Fe}_2\text{O}_3, \text{Al}_2\text{O}_3$), but how anybody with a reputation could add such an easily detected thing as lycopodium puzzles me. The Indian hemp I was very sceptical about, and carefully compared an alcoholic alkaline solution with a dilute tincture of Indian hemp made in the same way. The smell is totally different; and, besides, on diluting tr. cannab. ind. with water there is a separation of resin, which is not found in the case of the “euonymin” tincture. If, however, some tr. cannab. ind. is diluted with water, the mixture shaken with ether, the ether separated and evaporated, and the resulting extract dissolved in spirit, a green tincture is obtained, which is free from the characteristic hemp smell, and behaves in every way like the “euonymin” tincture.

The green colouring-matter is evidently not chlorophyll, because it is not coagulated or destroyed by boiling. It is not an aniline colour, because permanent in the presence of acids and alkalis and shows no fluorescence.

The sample also reduced Fehling's solution. But why

should sacch. lact. be used? Is it to make up for the large amount of insoluble matter present?

Yours,

G. A. GRIERSON.

SIR,—I observe a note on green “euonymin” in this week's CHEMIST AND DRUGGIST, and I think there is little doubt that this refers to an article which I have also examined. I have observed the crystals referred to by Mr. Collins. They are evidently sugar, and very probably, as he says, sugar of milk. I also observed the particles which he describes as black. When mixed with glycerine on the slide, I found they appeared dark brown, and thought they were probably real brown euonymin. As to the green colour, there is really a wonderful similarity in appearance and smell between it and Indian hemp extract. On comparing them more carefully, however, I was led to doubt the Indian-hemp theory, and to test the point Dr. Stockman has kindly tried the sample physiologically. He gave about 15 grains to a rabbit, and there was no symptom of Indian-hemp poisoning produced. Another worker informs me that he had occasion to extract chlorophyll, by means of ether, from spinach and cabbage, and found the product had a smell and appearance very like the ether extract of the “euonymin.” I am inclined to think, therefore, that it is not Indian-hemp extract, but chlorophyll obtained from some green vegetable by extraction with ether, and added to a certain proportion of brown euonymin along with sugar of milk and lycopodium.

Yours faithfully,

Edinburgh, March 11.

J. RUTHERFORD HILL.

Mr. Collins writes:—“In my note the twenty-first line from bottom should read, ‘Loss—water previously determined = water-extract + sugar of milk.’”

Dr. Le Caron.

SIR,—Noting an item in your issue of February 16 concerning the detective Le Caron, or Beach, I thought it might interest some of your readers to learn a few facts connected with his career as a pharmacist in this country. I first met “Dr. Le Caron,” as he was, of course, invariably known here, at the annual meeting of the Illinois State Pharmaceutical Association in the spring of 1884, or it might have been a year later at the meeting of that body at Springfield, the capital of the State; at this late date I cannot be certain without consulting records not easily accessible. However, the doctor was at that time prominent in Illinois pharmaceutical circles, being the proprietor of several drug stores in as many different parts of the State, and was so favourably thought of by his colleagues that, at the meeting of which I write, he was elected president of the association, to serve for a year. Although I cannot now recall any of the points of the address he delivered before the association, I remember that it impressed me at the time as giving evidence of careful preparation. It was such as might have been delivered by any man impressed with the dignity of his calling, and fully in sympathy with the desires and objects of such a body of progressive men. Illinois was then, and always has been, a leader in all matters pertaining to the advancement of pharmacy in the United States, and when “Dr. Le Caron” presided over the State Pharmaceutical Association that body was particularly active in efforts to secure and have enforced more effective State pharmacy laws. To be the president of such an association, therefore, implied peculiar fitness for the exalted office, and that “Le Caron” possessed apparently in a high degree. After that meeting I met him at more or less frequent intervals in St. Louis, Mo., where, as editor of the *National Druggist*, I was then located. He came to that city for the ostensible purpose of buying goods for his Braidwood and other stores in Illinois, but in reality, as I now believe, to watch the Irish societies of St. Louis.

I lost track of him after my return to New York several years ago, and had about forgotten him, when his tall, spare figure, sharp eyes, and his dark parchment-like face (then partially covered by a dark beard) were vividly recalled by the report of his appearance before the Parnell Commission. There are many Illinois pharmacists to whom that report was a shock, as in all his coming and going no one could have suspected that he was other than the respectable

earnest physician-pharmacist, the efficient and highly-respected erstwhile president of one of the largest and most progressive of pharmaceutical associations in the United States—"Dr. Henri Le Caron."

72 William Street, New York,
February 28.

Very truly yours,
A. C. STOCKING.

Inland Revenue Grievances.

SIR,—The "thorn in the flesh" of our Newcastle friends is one which has been felt in other parts of the United Kingdom, and when attention was drawn to its effect some months ago, only those who had suffered from it were disposed to move in the question.

One point upon which some of your correspondents dwell is that the wording of the Act is so ambiguous that the Inland Revenue department ought not to impose fines without first intimating the intention to do so. I can quite believe that the majority of retail chemists either accepted a label as presented by the printer, or in making alterations did not intentionally seek to evade the law, but innocently supposed that it was justifiable to explain to the public the uses and doses of the preparation the label covered.

In judging whether a label renders the article liable to stamp duty, there is no doubt it is necessary to have a clear perception of the meaning of words used in the Act, and then it will be readily seen that the proceedings of the department are quite in accord with the law as it now stands; therefore the only course which the retail chemist can adopt is either to make a strenuous effort to get the Act repealed in all its clauses, or by the introduction of a clause in some other Bill obtain exemption for those who are registered chemists and druggists. This can only be done by concerted action throughout the country, and as such an effort was made by the Chemists and Druggists' Trade Association, as a last gasp previous to its untimely end, without any results, it is evident something else must occur before the trade will awake to its interests, and be determined to fight for the chance of a respectable living without the many trammels which up to this time hamper our commercial progress.

It may interest our Newcastle friend if I mention that those who are acting as detectives for the Inland Revenue department visited Leeds eighteen months ago, and succeeded in getting a fine haul out of the town, if, as stated, the informer receives half the fine. I should be glad if any of your correspondents can tell me if these emissaries pay their own travelling expenses; and, if so, why the department does not object to enforce the fines obtained from a large town until it is reported that all the villages and small towns, where a retail chemist does exist, have been searched to prove that there are no defaulters in them; and also whether the expenses of visiting these places would be borne by the department or would be allowed to the informer, as well as the proportion of fine.

Another question, which has absorbed some attention lately, is the practical working of the Spirits Act. It certainly seems very curious that a retail chemist may keep methylated spirit upon his premises for sale, and sell it to the public in quantities of $\frac{1}{2}$ pint to a gallon, without any restriction; but if he mixes a deadly poison with it, or adds anything thereto to make it more nauseous than it was before, or less liable to be used for internal use, it is necessary to give a bond.

Upon both these questions it might be possible to agree upon and frame a memorial to Parliament, and by sending copies to the Pharmaceutical secretaries in each town or by other means get the signatures of nine-tenths of the retail chemists.

Yours respectfully,

Leeds, March 11.

EDWIN YEW DALL.

SIR,—Your correspondents, smarting under a fine for sell—"Bryonia liniment for rheumatism" and "Rubini's camphor," have suddenly discovered the harassing and stringent nature of the Patent Medicine Act, and suggest that the trade should combine to maintain their privileges, &c. Of course they should, but they won't. Letters of this kind have been appearing for years, but no action is taken, and a large number still support the Pharmaceutical Council, which think of nothing but the advancement of pharmacy and

Curriculum Bills. What an excellent letter that is from Mr. Davies, who points out that genuine or strong seidlitz powders are pronounced liable by the Board, whereas common sense would dictate that if pyretic saline is exempt, surely seidlitz powders must be exempt also! But then, we have not the penetrating powers of the Board of Inland Revenue. Is it not rather a simple question to ask, "What is the Pharmaceutical Society, which should represent our interests, intending to do?" There are hundreds of chemists who will answer with me, "Nothing." I have for years saved my guinea subscription to the "Square," knowing I could get better value for my money elsewhere. Will some one start a defence fund?

London, March 11.

Yours truly,

POOR PILL. (3.55.)

Sir John Lubbock's Half-holiday Closing Bill.

SIR,—Our old friend Sir John Lubbock in his Bill says:—"Where two or more trades are carried on in one shop, and a closing order applies to one of them, the shop is to be wholly closed."

How does he arrange where a chemist is a local post-master? Has he obtained the consent of St. Martin's-le-Grand to that measure? If not, is that chemist to be allowed to keep open to the detriment of his neighbouring chemists?

ROBERT OWEN FITCH.

255 Well Street, South Hackney, E., March 9.

The Proposed Syndicate.

SIR,—In your issue of February 1 you inserted a letter from me which has been variously commented upon. The proposition I made may be put in a nutshell. Are the proprietors of the leading patent medicines, &c., willing to co-operate with the retailers in checking what is an evil to both, or must it become a "war to the knife" between us? If they are willing, some plan can doubtless be devised. Will Messrs. Beecham, Holloway, White, &c., kindly state their views in your columns, as this would prepare the way for action? Unless something is done speedily the sales will soon be only a tithe of what they were, and the public will lose faith in them if supplied solely by grocers and stores. My experience of cutting prices is that the public doubt what can be bought at any price, the idea that they get value for money being rudely disturbed. In this town the sales have diminished considerably since prices were lowered, and the gradual effect will be that none but quickly-selling goods will be kept, and these only sold on compulsion.

Yours faithfully,

ESS. LIMONIS.

Income-tax Assessment.

SIR,—Allow us again this year to call attention to the fact that in all cases where the profit of the year have not been equal to the assessment—and we fear that in many cases it has not been—traders should apply for relief and repayment of tax. This repayment can either be allowed on the difference between the assessment and the average on the three years' profits, or between the assessment and the year's profits, whichever is most advantageous to the Treasury. This is scarcely fair; however, the tax-payer must be thankful for small mercies. Persons who intend to claim should obtain "Income-tax: How to Get it Refunded," and in making out their accounts should use the forms therein recommended. There are two other little books which we strongly recommend, Chapman's "Inhabited-house Duty" and Laurie's "How to Appeal against your Rates." Armed with these, no person should be over rated, over-assessed, or over-taxed. Your obedient servants,

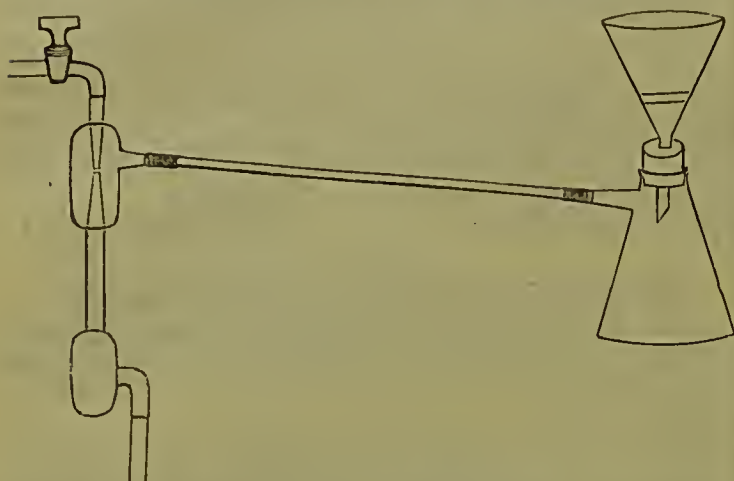
THE INCOME-TAX REPAYMENT AGENCY.

25 Colville Terrace.

Filtration of Glycerine.

SIR,—A "London Subscriber" may filter his glycerine without previous admixture with water if he will use a filter-pump. The most convenient form is that founded on the principle of the steam-injector, and first designed by me in 1876. He can get one from Townson & Mercer (Cata-

logue No. 681r, 2s. 6d.). Attach this to a high-pressure water-supply, and connect the outlet with a long tube to prevent back pressure. Attach the side tube of an Erlenmayer flask (No. 610) to the pump by a piece of glass tube and short lengths of rubber tubing. Adapt a funnel by



means of a rubber cork. In the funnel place a perforated plate (No. 637), cover with a disc of paper or glass-wool. Turn on the water, and pour the glycerine in the funnel. Bell Lane, Wandsworth. A. PERCY SMITH.

Dale's Plaster.

SIR,—It may interest some of your readers at a distance from Newcastle to know the nature of Miss Dale's plaster, which has recently given trouble to many tradesmen in the North in relation to the stamp duty. The formula is as follows:—

						Lbs.
Red lead	..	..	..	..	..	6
Sweet oil	..	..	..	..	..	12

Boil to a proper consistency; then add—

Resin	..	..	..	..	..	3
Yellow wax	..	..	..	..	..	3

Melt, and cut into $\frac{3}{4}$ -oz. rolls.

Miss Dale's custom, when she was in existence many years ago, was to buy a few pounds of these rolls and give to poor people. The plaster, no doubt, acquired much of its popularity to the fact that it was distributed by a charitable lady, and retained its popularity because it met a common want at a small cost. The formula as above used to represent a batch "when I was young." But the fact that the formula is generally known has thrown the current of the trade into the hands of those who cater for small shopkeepers.

11 Grey Street, Newcastle,
March 7.

BARNARD PROCTOR.

The Alkaloids of Pepper.

SIR,—I refrained from replying to the criticisms contained in your issue of November 24 upon the announcement which appeared in the *Chemical News* concerning the discovery of the existence of piperidine in pepper by myself, pending the reading of a paper upon the subject before the Society of Public Analysts, a copy of which I now enclose you.

By perusal of the same you will there find stated how the piperidine is separated from the piperine and pepper.

The hydrolysis of piperine does not take place upon simply boiling piperine with water, and I totally disagree with your critic's "erroneous assumption" that the pungency of pepper is due to the resinous principle contained in pepper, and I also maintain my statement that black pepper is more pungent than white pepper. Hoping you will give the above as prominent a position as your criticism,

Yours, &c.,

March 8.

WILLIAM JOHNSTONE.

[This letter is noticed elsewhere in this issue.—ED.]

DISPENSING NOTES.

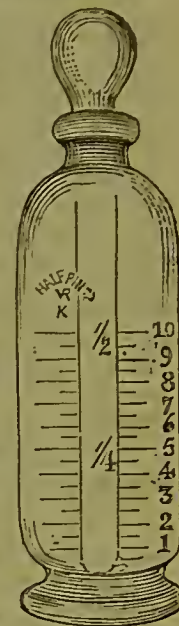
The opinions of practical readers are invited on subjects discussed under this heading.

Dispensing Conveniences.

SIR,—The letter of "J. K. H." (236/20), in your issue of February 9, under the above heading, set me upon carrying into practice an idea which has often passed through my mind. With the aid of Mr. Clarke, representing the York Glass Company, it has now been embodied in the Stopped Mixer, of which the annexed is a drawing.

As suggested by "J. K. H.," it is a graduated bottle mounted on a foot, partly to facilitate accurate measurement, partly to make it more easily cleansed; the mouth is sufficiently wide to admit a bulky solid; it is stoppered and provided with a spout; the total capacity is rather less than 14 fl. oz., the graduations are exactly the same as a 10-oz. measure, so that room is left for possible frothing. Longer experience may possibly reveal unexpected defects, but at present I regard it as likely to be eminently useful.

Despite one's utmost care, particles of solid matter sometimes show themselves in making a solution, say, of citrate of potash, and the use of the mixer will ensure their absence from the mixture; syrups, glycerine, or mucilage will be more conveniently measured and mixed than by the present plan of stirring them in an open measure with a portion of the menstruum; and glaring inaccuracies in the sizes of dispensing bottles will be easily detected and guarded against. Upon these grounds I venture to recommend the Stopped Mixer as a useful addition to the dispensing counter.



Yours very obediently,

Dover, March 11.

J. F. BROWN.

Suppositories.

SIR,—In reply to "Omega's" query respecting the making of the atropia suppositories, I may mention that I had exactly the same prescription given in my examination to dispense. I took 1 grain of atropia and dissolved in $\frac{3}{4}$ S. V. R., and used 15 m. for my six suppositories. This procedure satisfied my dispensing examiner, and also,

Yours truly,

York, March 2.

JOHN SNOWDON.

A Bismuth Mixture.

SIR,—What is the best way to dispense the following should mucilage be added to suspend the chloroform?

Acid. pruss. dil.	..	..	..	..	3i.
Chloroform.	..	..	..	..	m 36
Bismuth. subcarb...	..	..	..	..	3iv.
Aq. ad	..	..	..	..	3vj.

M. One-twelfth part three times a day.

D. H. (4/48.)

How to Dispense Clear.

Spt. ammon. fort.	..	..	..	..	3vj.
Spt. camphorae.	..	..	..	..	3ij.
Salt..	..	..	..	..	3iij.
Water	..	..	..	..	3xxij.

M. Ft. lotio.

LIGNUM. (4/12.)

MISCELLANEOUS INQUIRIES.

255/73. *Carlo*.—**Spanish Clay** is used by brewers for refining beer. It is a white earth containing barium carbonate. See page 91 for particulars regarding compounds used for glazing.

259/19. *Hederal*.—(1) **Canary Seed** is obtained from canary grass, *Phalaris Canariensis*. (2) Benzoline is really purified coal-tar naphtha.

45/257. *A. H. W.*—**Lambing Oils**.—Ol. viridis, 4 oz.; ol. cassiæ, 1 drachm; ol. olivæ, to 40 oz. This is given in doses of two tablespoonfuls. For an external application the same may be used with the addition of 1 oz. of carbolic acid. In cases of prostration, where it is feared the morbid matter may have been already absorbed, the following is a good medicine:—Potass. iodid., gr. ij.; ol. morrhuæ, 3j.; pro dosi; bis die.

257/1. *Wax*.—Chloroform is as agreeable a **Solvent for Wax** as you can have. It dissolves about one-twelfth of its weight of the wax.

2/42. *W. R. F.* asks, "What is the difference between **Chlorodyne** generally sold and tr. chlorof. et morph. B.P.?" We presume that our correspondent refers to imitation chlorodyne; if so, he should refer to the half-dozen formulæ printed side by side in our issue of August 4, 1888, page 169, and from this he will see how very different from each other popular formulæ really are. Squire's preparation was, perhaps, in most general use before the B.P. formula saw the light (the official formula is apparently a modification of Squire's); but formulæ identical with, or similar to, Ogden's were and are still much in use, because the original article is supposed to contain extract of Indian hemp, and Ogden's formula, being based on that assumption, is preferred by many. Martindale's formula is an excellent one, and is also popular.

2/12. *D. K. S.*—You will find full particulars regarding **Dispenserships in the Army** in our Educational Number, September 22, 1888. There are no similar positions in the navy (see this journal, November 3, 1888, page 626), nor in the merchant service.

2/14. *T. F. Walker*.—**Acid Sulphate of Potash as Baking-powder**.—The information which we have previously given is quite correct. You cannot possibly introduce as much into bread, without making it nasty, as will act as a purgative, and sulphate of potash is not more aperient in effect than Rochelle salts. The statement made by the wholesale firm that acid sulphate of potash is unsuitable for baking is in a certain measure correct; nevertheless, tartaralime—a popular tartar substitute—is acid sulphate of potash with some starch. Fourteen oz. of the sulphate and 8½ oz. of bicarbonate of soda should give a slightly acid mixture after combination takes place ($\text{KHSO}_4 = 136$, $\text{NaHCO}_3 = 84$). Fruit acids are not so acrid as mineral acids.

1/45. *W. A.*—We really do not know what you mean by essences. Please explain.

257/9. *Nero*.—(1) The report of the political post-card competition appeared in our issue of January 5. It showed that amongst the chemists who voted there were 47½ per cent. of Conservatives, 41½ per cent. of Gladstonian Liberals, and 11 per cent. of Liberal Unionists. (2) The **Essence of Peppermint** generally sold contains 1 drachm of the oil in an ounce. This preparation should not, however, be sold under the British Pharmacopœia name.

3/25. *Graham*.—**Solution for Coating Corks**.—Dissolve an ounce stick of red sealing-wax in 4 oz. of methylated spirit. Dip the upper parts of the corks in this solution and allow to dry.

3/33. *J. Billington*.—See reply to "Nero."

3/28. *T. I. A.*—(1) Try Hassall's phospho-citric acid. (2) Gould's "Artificial Aërated Waters" was published by Barrett, 21 Seething Lane, London.

A correspondent rightly calls attention to the incorrect expression, "ammonium hydrochlorate," page 348. Ammonium is NH_4 and ammonia is NH_3 , therefore AmCl is either " NH_3HCl = ammonia hydrochlorate," or " NH_4Cl = ammonium chloride." The former expression, we may add, is by many chemists considered to be more correct than ammonium chloride, for it agrees with the results of dissociation and conforms with the formulæ of alkaloidal salts.

3/29. *S. C. M.* sends a number of questions regarding **DIARY** formulæ. (1) "Teething Syrup," page 161, ext. apii fluid. Try Potter & Clarke for this. The quantities are correct. (2) In "Elixir Rose pour les Dents," page 164, as in some other cases, the signs for quantities appear to have dropped out while printing. The quantity of distilled water is 3ij. (3) "Tinot. Quillaia," same page, quillaia, 3ij.; S.V.R., 3x. (4) "Dental Stopping," same page, camphor, 3vij. The other quantities which you quote are correct.

4/15. *Bretal*.—The sample which you send is kus-kus root, and is principally used for making mats, small baskets, and other knick-nacks. It contains an odorous principle.

64/3. *Essential Oils*.—We do not think the odour is special to any one substance.

259/27. *A. G. K.*—We do not have a satisfactory formula for cyclostyle ink.

228/34. *W. H.*—(1) You will find particulars regarding the apothecaries' assistants' examination in our issues of October 29, 1887, and September 22, 1888. We cannot repeat the information. (2) The climate of Barbadoes is excellent, and Europeans seem to flourish in it.

1/60. *Pendennis*.—**Warburg's Tincture**.—The simplest formula for this preparation is as follows:—Aloes and zedoary, of each 40 grains; camphor and angelica root, of each 2 grains; saffron, 3 grains; proof spirit, 3 oz. Make a tincture, and put into 3v. bottles, adding to each 6-grains of sulphate of quinine. This materially differs from the formula revealed by Dr. Warburg, which is:—Aloes Socot., lb. j.; rad. rhei E.I., sem. angelicæ, conf. damocetratis, of each 3iv.; rad. enulæ, croci sativ., sem. fœniculi, cretæ prep., of each 3ij.; rad. gentianæ, rad. zedoariæ, bacc. cubebæ, myrrhæ, camphoræ, bolet. laricis, of each 3j.; proof spirit, 500 oz. Digest on a water-bath for twelve hours, then express and dissolve 10 oz. of quinine sulphate in the fluid by the aid of heat. When cold filter. Dr. Warburg gave the formula to Professor W. C. Maclean, inspector-general of the Indian army, in 1875, and in November of that year Professor Maclean published it in the *Lancet*. For a long time the tincture had been successfully used in India, but we do not think that Squire is correct in saying that the formula was published by order of the Indian Government. At all events that Government made no return to Dr. Warburg, and he, as the result of the publication, lived in poverty for many years. The name, "Warburg's Fever Tincture," will doubtless be regarded by the Somerset House authorities as rendering the preparation liable to stamp-duty. But you had better ask them and let us know the result.

2/55. *J. C.*—**Spirit Colouring.**—Heat sugar in a metal vessel, with constant stirring, until it is of a dark brown colour; then add water to form a syrup, and strain. **White Teething Powders.**—Calomel, 4 grains; bicarbonate of soda, 12 grains; saccharin, $\frac{1}{2}$ grain. Mix and divide into twelve powders; one for child of 6 to 12 months.

2/73. *Fly.*—A tincture of insect-powder sponged on the face is good for warding off flies; so also is oil of cedar.

259/52. *J. Falcon.*—Piesse's "Art of Perfumery" and THE CHEMISTS' AND DRUGGISTS' DIARY, 1889.

250/3. *Salol* makes a **Spiced Vinegar** according to the following formula, and wishes to know the best plan for turning out 50-gallon quantities:—

Pimente ..	..	..	..	..	10 oz.
Piper nig.	..	..	..	..	4½ "
Rad. zingib.	..	..	..	..	7½ "
Caryoph...	..	..	..	..	9 drachms
Capsici ..	..	..	..	..	4½ drachms
Acid. acet. fort.	..	..	..	..	6 pints
Aqua ad ..	..	..	..	..	6 gallons

On the whole the simplest and best method would be maceration and percolation. A 10-gallon oil-tin with the bottom knocked out of it, and the other end shaped like a funnel, will serve admirably as a percolator. Take the spices, previously bruised and mixed, add some of the strong acetic acid, and allow to macerate for two hours, then pack in the percolator, which has previously been prepared by placing in it a piece of calico, then a layer of sand, and a layer of gravel, with another piece of calico on the top. Add more of the acetic acid, up to one-half of the amount in the formula. Allow to macerate for three days, then percolate, and continue the percolation with the rest of the acid diluted with half of the water. When this is done, finish with the rest of the water made tepid. The quantities of spices used are not too great; and, when done with, should be treated as refuse. (2) The cocaine solution, 240/17, was 20 per cent.

260/28. *Ernst.*—**Elixir Aurantii, U.S.P.**—Oil of orange, 1 part; cotton, 2 parts; sugar, in coarse powder, 100 parts; alcohol, 67 parts; water, 134 parts. Add the oil of orange to the cotton in small portions at a time, distributing it well by picking, then pack it in a conical percolator, and pass the mixture of alcohol and water through until 200 parts of filtrate are obtained. In this dissolve the sugar.

245/53. *Alpha.*—The **Battery Solution** is a strong solution of acid sulphate of mercury ($\text{HgSO}_4, 2\text{SO}_3$). You can make it by treating 1 oz. of sulphate of mercury with 1 oz. of water, heat, and add sufficient sulphuric acid to dissolve the turpeth mineral formed, then make up to 6 oz. with water.

11/249. *Tontine.*—The **Cure for Drukenness** is not amenable to chemical analysis. Judging from the taste the principal ingredients of it are ginger, capsicum (a very little), gentian (less), and much liquorice. We have seen it before, and should think that it is valueless.

250/39. *Meta.*—(1) Kent hops are the best hops you can use for an extract for aerated waters; but why not use lupuline, which is less bulky, and contains all the aroma required? Two oz. of hops to the pint are sufficient, and at least 30 o.p. spirit should be used. (2) The **Lemon Compound** which you send appears to be a mixture of 3 parts of glacial acetic acid, 1 part of oil of lemon, and a trace of bisulphite of lime. This is an ingenious mixture, 1½ oz. of which should, we think, make a good syruping liquid with a gallon of syrup. (3) We have heard, on good authority, that if fruit is kept in chloroform vapour (in closed bottles) it keeps well, and we see no reason why plums should not in the same circumstances.

3/246. *Ultima Thule.*—It is impossible to say what the component parts of the kola paste are.

41/253. *Ferrum.*—We do not have time to examine such articles.

53/256. *Aeton.*—The face-powder is composed of starch and talc. We do not know the perfume.

258/37. *C. Ridley.*—The **Shaving Powder** is simply powdered curd soap.

261/16. *Rhei* (Glam.).—**Opaline for the Hands and Face.**—This is a syrupy liquid preparation which is "highly spoken of as a preparation for the skin." A similar article may be made from the following formula:—

Glycerine ..	..	..	..	..	2 oz.
Rose water ..	..	..	..	..	5 "
Mucilage of tragacanth ..	..	..	..	..	3 "
Oil of lemon ..	..	..	..	..	30 drops
" bergamot ..	..	..	..	..	20 "
Rectified spirit ..	..	..	..	..	½ oz.

Mix the oils with the spirit, shake well, and add to the other ingredients previously mixed.

3/12. *J. H. H.*—Murrel's "What to do in cases of Poisoning" (Lewis) is a book which will suit you. See "The Art of Dispensing" for a posological table.

257/8. *Hyacinth.*—Yes, the felon drink is strong, and will be dangerous in some cases.

200/8. *Prorsum Celere.*—Thanks for your curiosity, which we regret we do not have room for.

3/68. *Corporal Trim.*—We have no means of knowing.

4/4. *Anglo-Hibernian.*—(1) The most effective way of **Rendering Euonymin Soluble** is to treat the proof-spirit tincture of the bark with light carbonate of magnesia. This will not mix with acid preparations of pepsin, but it may with liquor bismuthi. Liquid preparations of euonymin which mix with any aqueous liquid contain an infinitesimal amount of the chologogue. (2) Soap liniment is dispensed for **Lin. Saponis Co.**

4/63. *Phœnix.*—Solution of zinc chloride is used for soldering.

3/71. *Interested One.*—A pharmaceutical chemist of Ireland cannot carry on business in Great Britain as a chemist and druggist; that is, using the title and selling poisons.

2/60. *H.*—You had better submit your label to Somerset House for decision. If they say it is liable you can easily make up one that is not so from the indications given in Alpe's "Handy Book."

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

2/14. Bisulphate of potash in fine powder, where obtainable.

3/36. Formula for Dr. Rooke's golden ointment. He advertised for years he would supply it to any chemist, but now has withdrawn the offer.

260/52. Composition of Gibson's gout and rheumatic cure.

* A large part of our correspondence is held over this week

NEPENTHE.

(Prepared exclusively from Opium.)

The safest and best preparation of Opium; produces neither headache, sickness, nor constipation.

Dose, the same as that of Tinct. Opii, B.P.

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Trade and Wholesale Terms for NEPENTHE upon application.

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Very strong & nutritious, THIS Cocoa is cheaper & more satisfying than Tea.

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"flavour perfect,"		"PURE & unmixed,"		} <i>LANCET.</i>
"and SO PURE."		"goes a long way."		
	} <i>MEDICAL</i>			
	} <i>JOURNAL.</i>			

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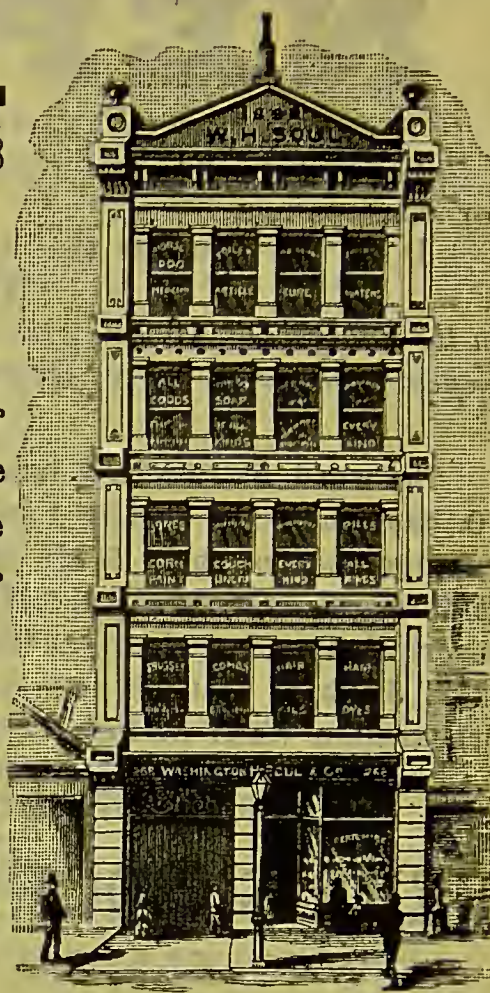
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to obtain from their
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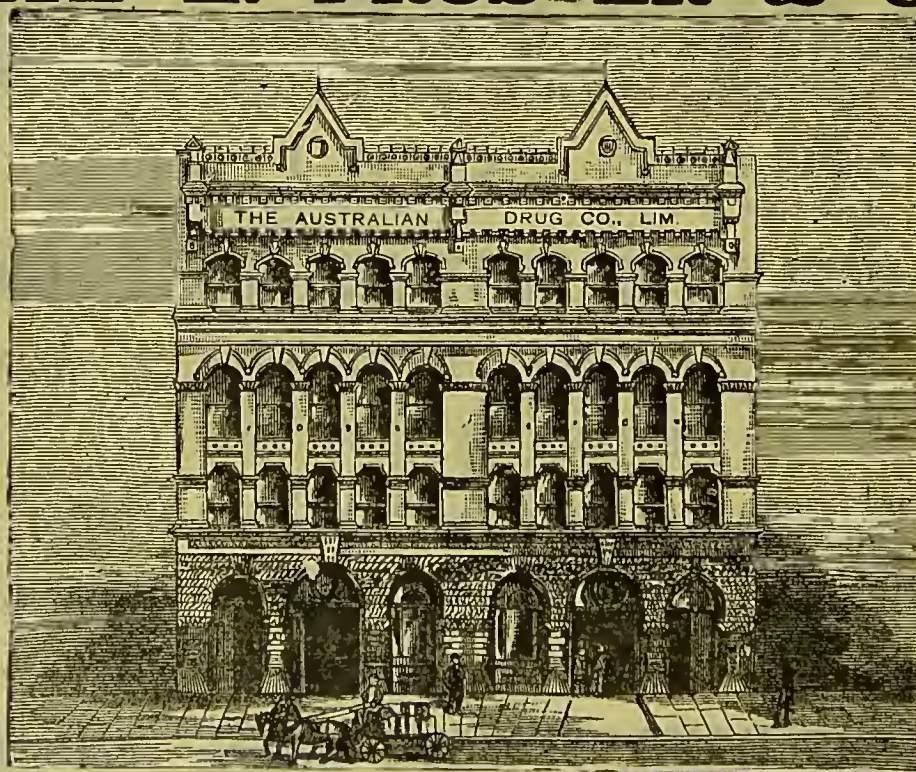


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Our Extra Steam Refined Oil is treble distilled and twice rectified by steam, by an entirely new process and in apparatus of our own invention, by which all these polymeric products

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of a tarry and resinous nature which are objected to by some consumers are extracted. It is of water white colour, retaining its full aroma, pungency and strength and guaranteed absolutely pure and soluble in spirits of wine.

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MINT, NOT deprived of its Menthol, 8s. 9d. per lb.

An original 22-oz. bottle free by parcel post for 12s. 6d.

8-oz. Capsuled E. I. Mustard Seed Oil, branded "Star of

India" on Capsule, bottle ... 8/9 per doz.

4-oz. Capsuled ditto, ditto ... 5/6 " "

28-lb. tins Dalmatian Insect Powder ... 1/2 per lb.

56-lb. tins Chilian Honey ... -/3 " "

10-lb. tins Super Ess. Lemon ... 5/6 " "

7-lb. pottle P. Rhei E. I. Elect ... 3/- " "

56-lb. Bale Senna T.V. ... -/3¼ " "

4½-gallon tins finest non-freezing Norwegian

Cod Liver Oil ... 4/6 per gal.

CIRCISSIAN SWEET OIL. — 40-gallon

barrel, bright and clear as COLZA OIL—1s. 6d. per gallon (for Hair Oil, &c.); sample 9-gallon tin for 15s.

40-lb. tin Baseline Petro. Jelly (firmer than Vaseline) ... -/4 per lb.

(Best Ointment and Pomade basis.)

Dozen Pure Menthol Cones, in neat turned wood boxes ... 2/- per doz.

One-Gross case 3d. size "Struck down Dead"

Vermin Killer, with "Poison Register," for 10/6.

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Our coating is well known as possessed of excellent keeping qualities, being thin in substance, soluble, and well adapted to retain the essential oils contained in the pill masses.

For finish, and general good appearance, they will compare most favourably with any in the market.

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The only oval gelatine-coated pills of English manufacture in the market. The distinctive colours of the ingredients contained within them show through the transparent covering, and our gelatine-coated pills are admirably adapted for the elegant administration of *single drugs*, as well as compound pill masses.

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MALTED FOOD FOR INFANTS & INVALIDS.

In addition to sending out the above article in bulk, we are supplying it in Half-pound and One Pound Cardboard Cases, **ATTRACTIVE IN APPEARANCE**, and labelled without Name and Address.

PRICES.—In Bulk, 42/- per cwt.; Half-pound Packages, 4/- per doz.; One Pound Packages, 7/6 (subject to Patent Medicine Discount).

GLYCERINE SUPPOSITORIES. (WYLEYS) FOR USE IN CONSTIPATION.

AS FIRST INTRODUCED BY OURSELVES.

The Lancet says our Suppositories are "most useful and convenient additions to the Materia Medica."

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Ordinary (Pessary size) .. 1/6 dozen.
Small, for Children.. .. 9d. ,,

COMPRESSED PELLETS. PRICES.

Ammonium Bromide ..	5 grs.	5/ per lb.
Ammonium Chloride ..	3 "	2/6 "
Antipyrin ..	5 "	4/ per oz.
Antipyrin ..	10 "	4/ "
Phenacetin ..	5 "	5/ "
Potassium Chlorate ..	5 "	1/8 per lb.
Potassium Chlorate and Borax ..	5 "	2/6 "
Potassium Bicarbonate ..	5 "	2/6 "
Potassium Bromide ..	5 "	3/6 "
Salol ..	5 "	1/6 per oz.
Sodium Bicarbonate ..	5 "	2/6 per lb.

Soda Mints, containing Sodium Bicarbonate, Ammonium Carbonate, and English Oil of Peppermint ..	5 "	3/6 "
Sulphonal ..	5 "	5/ per oz.

Voice Pellets, consisting of Chlorate of Potash, Borax, and a minute proportion of Capsicum, so as to add a slight stimulating effect .. 5 " 4/ per lb.

Voice Pellets with Cocain. Each pellet containing, in addition to Chlorate of Potash and Borax, $\frac{1}{100}$ grain Cocain .. 5 " 5/6 "

Saccharine Pellets (small). We supply these in tubes of 25 and 50, and bottles of 100 pellets; each pellet containing $\frac{1}{2}$ grain of Saccharine and weighing $\frac{1}{2}$ grain only 3/9 5/6 8/ per doz.

Saccharine Pellets. $\frac{1}{2}$ grain in each, and weighing 1 grain .. 3/ per oz.

Saccharine Pellets. $\frac{1}{2}$ grain in each, and weighing 5 grain .. 9d. "

Sal. Prunella .. 5 grs. 2/6 per lb.

COMPRESSED PELLETS WITH SACCHARINE. PRICES.

Ammonium Bromide ..	5 grs.	7/6 per lb.
Ammonium Chloride ..	3 "	5/ "
Potassium Chlorate ..	5 "	4/6 "
Potassium Chlorate and Borax ..	5 "	5/ "
Potassium Bicarbonate ..	5 "	5/ "
Potassium Bromide ..	5 "	6/ "
Sodium Bicarbonate ..	5 "	5/ "

Soda Mints, containing Sodium Bicarbonate, Ammonium Carbonate, and English Oil of Peppermint .. 5 " 6/ "

Voice Pellets, consisting of Chlorate of Potash, Borax, and a minute proportion of Capsicum, so as to add a slight stimulating effect .. 5 " 6/6 "

Voice Pellets with Cocain. Each pellet containing, in addition to Chlorate of Potash and Borax, $\frac{1}{100}$ grain Cocain .. 5 " 8/ "

Sal. Prunella .. 5 " 5/ "

The above may be had either in bulk, or put up in metallic boxes, or heart-shaped bottles with white metal screw-caps. A special set of descriptive labels (without name) has been compiled for these boxes and bottles.

Concentrated Infusions and Decoctions, Granular Effervescent Preparations, Extracts, Spt. Ether. Nit., Spt. Ammon. Arom., Medicated Suppositories, Pessaries, Bougies, and Plaisters, Medico-Pharmaceutical Appliances, and all New Preparations and Medical Specialities.

THE DURAPLASTIC COATED HORSE BALL.

(PATENTED. No. 15215.)

*Extract from "The Veterinary Journal,"
December, 1886.*

Messrs. Wyleys & Co. have introduced a description of horse ball which appears to possess several notable advantages which should commend it to veterinary surgeons. These advantages are related to its shape, coating, and the solubility of this coating. The shape is exactly that of an elongated conical shot, which gives it the fewest possible points of resistance to entering the pharynx and œsophagus, enabling it to pass easily into the stomach, and reducing to a minimum the possibility of accident. The coating is on Fletcher's patent principle, and being absolutely air-tight, the therapeutic properties of the remedies it envelopes remain unimpaired for any length of time; while the ball is kept sufficiently firm to retain its shape, and is yet pliant enough to adapt itself to the fingers during administration. In addition to this, the coating is so soluble that it dissolves in less than two minutes at the normal temperature of the viscera, whereby the prompt action of the medicament is ensured, a point of much importance in urgent cases. The elegance and form of the bolus is in striking contrast to the old-fashioned paper-covered article, with its flat angular ends, and its too hard or too soft consistency.

No. 4.—Alterative Balls ..	24/ per gross
" 5.—Astringent Balls ..	24/ "
" 12.—Condition Balls ..	24/ "
" 6.—Cordial Balls ..	24/ "
" 7.—Cough Balls ..	24/ "
" 16.—Cough Balls ..	27/ "
" 17.—Cough Balls ..	27/ "
" 8.—Diuretic Balls ..	24/ "
" 9.—Fever Balls ..	24/ "
" 1.—Physic Balls ..	24/ "
" 2.—Physio Balls ..	30/ "
" 3.—Physio Balls ..	36/ "
" 18.—Physic Balls ..	42/ "
" 19.—Physio Balls ..	48/ "
" 15.—Stimulating Balls ..	24/ "
" 10.—Tonic Balls ..	24/ "
" 11.—Tonic Balls ..	20/ "
" 13.—Worm Balls ..	30/ "
" 14.—Worm Balls ..	60/ "

PRIVATE FORMULÆ.—WYLEYS & CO. will be glad to prepare Patent Duraplastic Balls from private recipes. Arrangements can also be made to have the name of the Chemist upon each Ball if desired upon orders of 2 gross of assorted Balls.

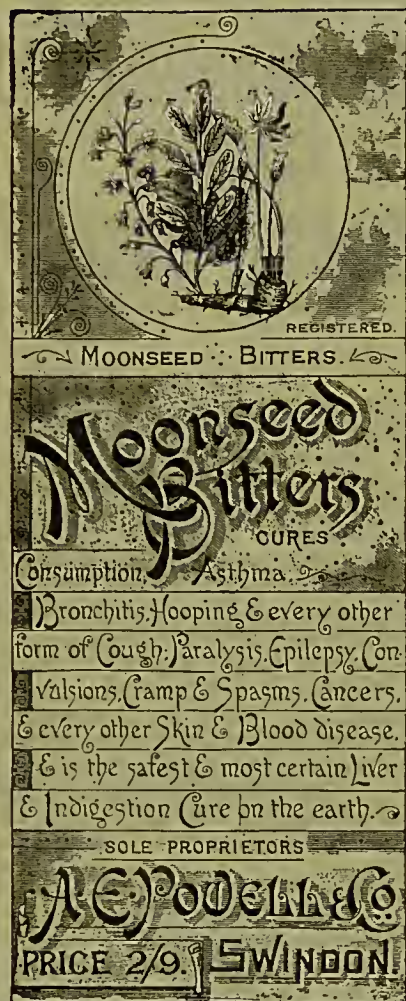
*All Balls are packed in boxes of one dozen.
Samples forwarded free on application.*

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.
It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets. All Goods are sent Carriage Paid for Cash in the United Kingdom.

A. E. POWELL & CO., SWINDON.

IMPORTANT NOTICE

PLEASE OBSERVE that, as the leading Wholesale Houses have now signed our contract, we no longer pay carriage through Messrs. Edwards & Son or any other house. Our goods being obtainable through these sources we can no longer fill retail orders, and we have to ask respectfully that such orders be entrusted to the Wholesale Houses.

Further, in the course of this week all the Houses who hold stock will receive supplies of our certificate, which is to be sent to the Wholesale Dealer when ordering. Chemists will please make a note of this, and apply to us for the form of agreement, as, if the terms of the certificate are not complied with, the goods are charged on the higher scale—that is to say, the prices charged to "cutters," viz., 4/5, 2/8, and 1/0 $\frac{1}{2}$ per box or bottle.

We respectfully call the attention of the Drug Trade to the Terms of the Agreement as given on the opposite page, and ask their support in maintaining prices and in extending the profitable sale of the article.

A. E. POWELL & CO.
SWINDON.

DR. JOHN FRANCIS CHURCHILL'S INHALANT



REGISTERED.

"SPIRONE"

TRADE MARK.

FOR THE TREATMENT AND CURE OF ALL

DISEASES OF THE LUNGS, WINDPIPE, NOSE, AND THROAT,

Claims to be a Specific for all Congestive and Inflammatory conditions of the Respiratory Apparatus, and will be found efficacious in

COUGHS AND COLDS, ASTHMA, BRONCHITIS,

Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Croup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

PREPARED ONLY BY THE INVENTOR.

None Genuine except such as bears the above Trade Mark "SPIRONE" and the Signature of the Inventor upon the Bottle on the Label over the Cork, and on the Wrapper,

JOHN FRANCIS CHURCHILL, M.D. (Paris),

The Discoverer of the Specific Cure for Consumption, and of the Medicinal Properties of the Hypophosphites

Price 4s. 6d. and 11s. per Bottle.

SET OF APPARATUS FOR ADMINISTRATION, 15/. PAMPHLETS AND SHOWCARDS FREE ON APPLICATION

THE SPIRONE COMPANY, Lim., Depot—17A Duke St., Manchester Square, LONDON, W.

Trade Mark.



Registered.

THE

ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,

12 PALL MALL EAST, LONDON, S.W.

SOLE AGENTS FOR DR. WARLONMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
 HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to

EDWARD DARKE, Secretary.

Office hours, 10 to 4; Saturdays 10 to 2.

DR. RENNER'S ESTABLISHMENT FOR

VACCINATION WITH CALF LYMPH,

186 (late 228) Marylebone Road, London, N.W.

VACCINATION FROM THE CALF DAILY FROM 11 TO 12 O'CLOCK.

Reduced price of Calf Lymph (daily fresh).

Tubes	Large	...	...	2s. each, or 3 for	5s. 6d.
	Small	...	...	1s. " "	2s. 9d.
Points	Large	...	...	1s. " "	2s. 6d.
	Small	...	...	9d. " "	2s.
Squares	...	...	...	2s. 6d. each.	

Registered Telegraphic Address—"VACCINE LONDON."

Sent on receipt of remittance addressed to the Manager of the Establishment. Discount to the Trade.

LINT.

GAMGEE TISSUE.

(PATENT ABSORBENT GAUZE AND COTTON WOOL.)

ABSORBENT
COTTON WOOL.

ROLL BANDAGES.

ROBINSON & SONS,

COTTON SPINNERS AND MANUFACTURERS OF

SURGEONS' LINTS, COTTON WOOLS,

AND BANDAGES,

WHEAT BRIDGE MILLS,

NEAR CHESTERFIELD.

Depot—55 Fann Street, Aldersgate Street, London.



TRADE MARK.

Telegrams: "PLASTERS LONDON."



NEW YORK & LONDON.

NEW YORK:

GEO. J. SEABURY, Pres't.

JOHN M. PETERS, Treas.

ROBT. J. SEABURY, Secy.

LONDON:

ALFRED H. MASON, F.C.S., F.R.M.S.

MONTREAL & HAMBURG.

40 Highest Awards over all Competitors throughout the world

SEABURY & JOHNSON,

ORIGINAL MANUFACTURERS OF

PHARMACOPŒIAL & SURGICAL PLASTERS

IN RUBBER COMBINATION,

Antiseptic Dressings & Absorbents, &c.

TRADE

HYDRONAPHTHOL

MARK.

(PATENTED),

AN ODORLESS, NON-POISONOUS, NON-CORROSIVE ANTISEPTIC,
AND ITS PREPARATIONS.

SUPPLIES MAY BE OBTAINED FROM

Messrs. DUNCAN, FLOCKHART & COEdinburgh.

Messrs W. & R. HATRICK & CO.Glasgow.

Messrs. BOILEAU & BOYDDublin.

Through any Wholesale Druggists and Dealers in Surgical Appliances,

OR FROM THE PROPRIETORS.—

SEABURY & JOHNSON, 46 Jewin St., London, E.C.

SEAMLESS SPIRAL STOCKINGS

Knee Caps, &c., Patent 4,682. No Seams to irritate the Heels and Feet.

Stockings, &c. with
"H" woven in the top
and all articles
stamped "H" are
Guaranteed as being of
Good Quality.

Inventor and Manu-
facturer of

SURGICAL ELASTIC STOCKINGS

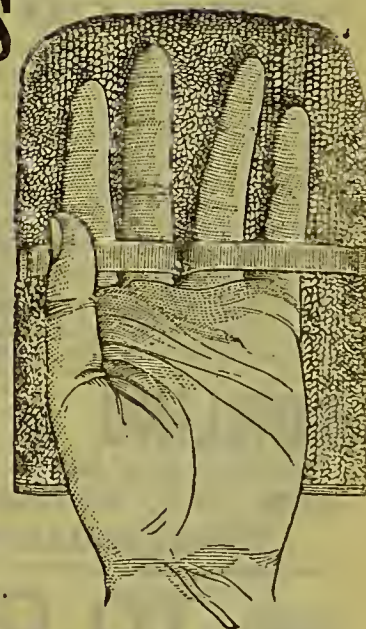
OF ALL KINDS.

GREAT IMPROVEMENT OVER ALL TRUSSES WITHOUT SPRING IN BAND

SPIRAL LOOM STOCKINGS,

Made from continuous piece of web sewn together.

EXCELSIOR TRUSS. Registered. No. 20,384.



REGISTERED HOLDFAST.

ZEPHYR STOCKINGS,

Light make, for summer wear. TRUSSES OF ALL KINDS.

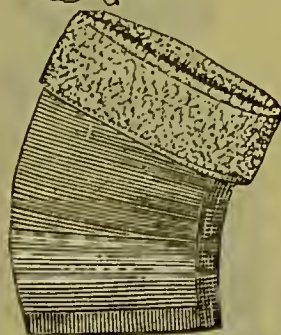
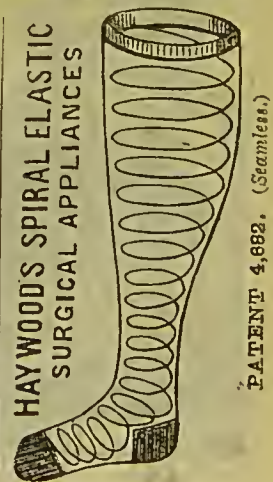
Bath Gloves. Holdfast, Registered Lawn Tennis Cuffs. Anti-rheumatic Knee Caps. Suspensory Bandages. Ladies' and Gents' Belts. Trusses and Belts for Bathing. Athletic Supports for Wrists, Elbows, Knees, and Ankles. Magnetic Appliances, Chest-Expanding Braces, Stocking Suspenders, Druggists' Sundries. Lists on application.

PATENT PILE SURGICAL STOCKINGS, &c.

PROTECTED, No. 14,618.

THIS Invention consists in raising a Pile or Fleece of a Velvety character upon the inside of Surgical Appliances, as Stockings, Knee Caps, Belts, Elbow and Shoulder Pieces, &c., which, lying over the Cords of Indiarubber, effectually prevents them indenting the Limb, and produces an equal and more comfortable pressure upon the swollen veins, without effecting the elasticity.

J. H. HAYWOOD, CASTLE GATE, NOTTINGHAM.



Patent Pile Protected, 14,618. The Pile lying over the Indiarubber Cords, protecting them and forming a smooth soft surface to the limb.

DISPENSING BOTTLES & PHIALS

The following are our greatly Reduced Prices:—

CLEAR BLUE TINTED.

3 and 4 oz.	6/6 per gross.	12 oz.	11/6 per gross
6 and 8 oz.	7/6 " "	16 oz.	15/6 " "

WHITE MOULDED PHIALS.

LONG OR SQUAT SERIES.

1/2 oz.	3/0 per gross.	1 1/2 oz.	4/3 per gross
1 oz.	3/6 " "	2 oz.	4/9 " "

Prompt attention to country orders. Packages 1/ each, allowed for if returned. Sample bottle sent free on application.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 70 years.

Bankers, London and Westminster.

DISPENSING BOTTLES & PHIALS

SPECIAL ATTENTION is called to our NEW CRYSTAL BLUE TINTED, being handsome colour and clear glass. We supply them—

3 and 4 ounce ... 7/9 per gross

6 and 8 " ... 8/9 " "

I & Co. Brand.

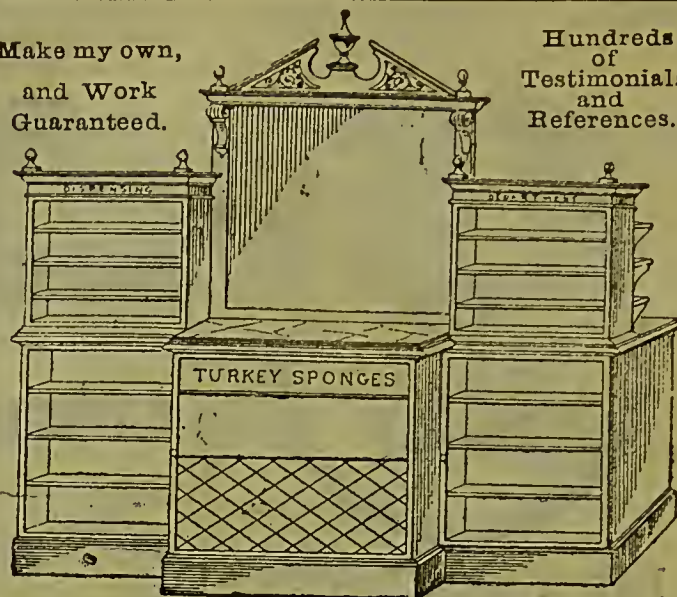
Sample Bottle free on application.

I. ISAACS & CO.

25 Francis Street, Tottenham Court Road, LONDON.

Make my own,
and Work
Guaranteed.

Hundreds
of
Testimonials
and
References.



The above represents a Plate-glass and Mahogany Dispensing Screen and Counter. The cases on each side of the marble slab over sponge case have silvered glass backs, and are fitted with movable shelves; the cases in front of counter are also fitted with movable shelves. The mahogany used is beautifully figured. At back under counter fitted with Drawers for Corks, Labels, Paper, &c., &c., and the back of screen with three shelves the entire length for Bottles.

6 ft. long, complete, £16; if Screen only, without Counter, £8 10s.

ELKANAH NATALI

(Established 20 Years),

SHOW CASE MAKER AND SHOP FITTER,

207 OLD STREET (Shoreditch End), LONDON;

Workshops—HENSON STREET, E.C.

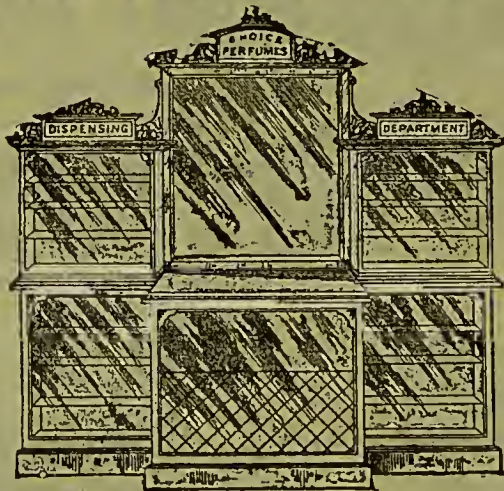
(ONLY ADDRESSES).

No connection with any other house of the same name.
PLEASE ADDRESS IN FULL.

"THE CHEMIST" DISPENSING COUNTER.

6 feet long by 2 feet wide .. £24
If the Dispensing Screen only, £12

This handsome Dispensing Counter is manufactured in Spanish mahogany, and of the best workmanship, so that it will stand any climate. The counter has a solid mahogany top, and plate-glass case front. The centre part fitted to take sponge. A mahogany screen on top, consisting of two plate-glass cases, with shelves inside, and large plate-glass mirror in the centre, and three glass tablets with gold writing in ornamental mahogany carved work. The back of screen fitted with small shelves and a glass poison cupboard. The inside of counter fitted with strong counter drawers, label and cork drawer, open shelves, &c.



BOWLING & GOVIER

Manufacturers of High-class Shop Fittings,
GUN ST., BRUSHFIELD ST.
BISHOPSGATE, E.C.



NOTICE TO THE TRADE.

In consequence of inferior Second-hand Goods being sold for our make, we have found it necessary to protect our reputation for best work with a Trade Mark, as above, and unless goods are so stamped we cannot be answerable.

Estab.] TO CHEMISTS AND DRUGGISTS. [1828.

ALBERT J. HARRIS,

MEDICAL LABELLER AND ORNAMENTAL WRITER

ON GLASS IN BURNISHED GOLD,

120 FARRINGDON ROAD, W.C.

North End. Five minutes' walk from Farringdon Street Station.

Show Jars labelled inside to any design cheaper and equal to any other house in London. Glass Facias, Show Tablets and Glass Labels for Drawers, 7s. to 10s. per dozen, with cement and instructions for fixing. Gold Paper Labels forwarded to any part of the country on receipt of 11s. at 3s. per dozen, all sizes. Orders by post or otherwise punctually attended to, and Shops labelled in any part of the country at 3s. 6d. per dozen on payment of third-class fare and lodgings. Show Jars relabelled equal to new.

A considerable discount allowed to Foreign and Wholesale Houses.





MELBOURNE, 1880.



SYDNEY, 1879.



PHILADELPHIA, 1876.



PARIS, 1878.



PARIS, 1875.

KILNER BROTHERS, GLASS BOTTLE MANUFACTURERS.



Dispensing.



LONDON, 1862.

TELEGRAPHIC ADDRESS—

"BOTTLES
LONDON."

TELEPHONE MESSAGES, No. 7509.



Dispensing.

Correspondence
cordially invited.

Quotations & Samples sent by return.

FEEDING, PICKLE,
DRUG, OIL,
SAUCE, VINEGAR
BOTTLES.



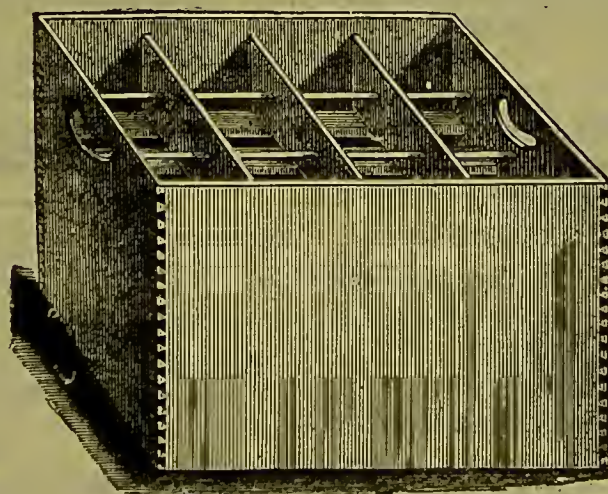
Feeding.

WINE, SPIRIT,
BEER,
CONFECTIONERY
BOTTLES.



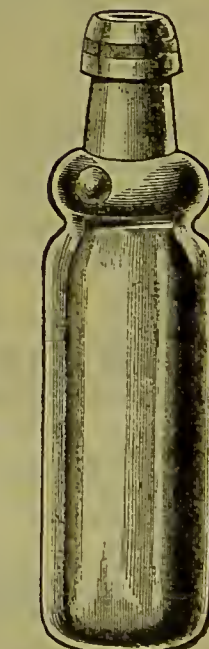
Mineral Water
BOTTLES.

VAN



BOXES, CASES,

&c.



Mineral Water
BOTTLES.

➡ No. 3^A GREAT NORTHERN GOODS STATION, KING'S CROSS, LONDON. ➡

The fatal effects frequently following the use of Narcotics in Patent Medicines suggested to the Proprietor of

STEDMAN'S TEETHING POWDERS



the advisability of having his Powders tested by DR. HASSALL, the result of whose analysis is certified below, hence vendors need be under no apprehension of the pain, trouble, and censure connected with most inquests, the occasional result of fatal doses of Patent Medicines.

STEDMAN'S TEETHING POWDERS.

THE ANALYTICAL INSTITUTION,

54 HOLBORN VIADUCT, E.C.

LONDON, 29th Nov., 1877.

REPORT ON THE TEETHING POWDER PREPARED BY
MR. JAS. STEDMAN, HOXTON.

I hereby certify that I have purchased a sample of **STEDMAN'S TEETHING POWDER**, and have, at the request of the Proprietor, subjected it to Analysis for Morphia or Opium in any form.

I am enabled to state that I found the sample in question to be absolutely free from Morphia, or any other Alkaloid or constituent of Opium.

Thus **STEDMAN'S TEETHING POWDER** is favourably distinguished from similar preparations.

ARTHUR H. HASSALL, M.D.

Thus Vendors need not be under any apprehension of interference either by Police or Coroner, as the **FREEDOM FROM NARCOTIC** removes Stedman's Teething Powders from the "Scheduled Poisons" List, and prevents the possibility of inquests on account of the administration of these Powders.

STEDMAN'S TEETHING POWDERS

are best distinguished by their proper brand, a Gum Lancet (as above), which specify in ordering.

Price 78/- per gross net.

Eight 1ls. Boxes, each containing 216 Powders, for £4 net.

SEIDLITZ POWDERS.

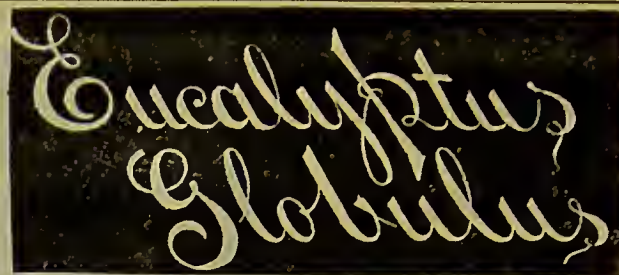
Full Size, and Prepared throughout with Howard's Materials.

Loose, 5s. 6d. per gross; in 1 doz. Coloured Boxes, Wrappers, &c., 6s. per doz. net.

TERMS—Cash with Order.

MANUFACTORY:—

125 NEW NORTH ROAD, HOXTON, LONDON, N.



We distil pure oil of Eucalyptus **GLOBULUS** as a by-product in the manufacture of our Eucalyptus Boiler Fluid, and are, therefore, enabled to place it in quantities at a lower rate than has heretofore been asked for it.

DOWNIE B. I. P. CO.

4 REDCROSS STREET, LIVERPOOL;

204 MARKET ST., SAN FRANCISCO; and

71 HUDSON STREET, NEW YORK.

METHYLENE.

Obtained by the action of Metallic Zinc on Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.

Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER.

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stoppered Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

In 2-oz., 4-oz., 8-oz., and 16-oz. Stoppered Bottles, 2s., 3s. 6d., 7s., and 12s.

PEROXIDE OF HYDROGEN.

First introduced as a Medicine by Dr. RICHARDSON.

ETHYLATE OF SODIUM

Dr. RICHARDSON'S Formula, for removing Nævi, &c. In 1-oz. & 1-l. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. &

STYPTIC COLLOID.

For promoting the Healing of Wounds by the first intention

In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES

Containing Pure Vegetable Ivory Charcoal.

In Boxes, 2s. 6d. each.

DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions. Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS.

LETHE.

GENTLEMEN,—We desire to call your attention to the fact that we are advertising a Specific for Neuralgia called "**LETHE**," and will be happy to forward you a sample for gratuitous distribution on receipt of card with address.

LETHE. Why is it a success?

1/1½.

Because it does what it professes. It is an absolute "Specific" for Neuralgia and pain of every description.

LETHE. Cures a larger proportion of cases than all the other remedies combined.

1/1½.

LETHE. Has been used in private practice for 15 years, and has an enviable reputation due to its marvellous results.

2/9.

Yours truly,

W. WRIGHT & CO., 2 ray's Inn Rd., LONDON.

P. GELSTON & CO.

Manufacturing Chymists, 31 China Lane, Manchester.

TOILET AND MEDICATED SOAPS

Of the Highest Quality and Purity, made by us with extreme care. These Soaps have a constantly-increasing sale, and give great satisfaction. Prices and Samples on application.

SPECIALITY:—Soaps made to Chemists' requirements, and Stamped or Wrapped with Name, &c.

H. BRONNLEY & CO.'S DESICCATED TOILET & MEDICATED SOAPS

Are manufactured by

MILLING SYSTEM.

Quality and elegance of the most prominent foreign makes.
SUPERFATTED SOAPS.

Steam Works—34 Verulam St., Holborn, London, E.C.



USED BY SURGEONS ALL OVER THE WORLD.

In ONE WEEK three curious uses were reported for which
"THE LEICESTER" IMPROVED ADHESIVE PLASTER,
On Fine Flesh-coloured Cambric,
is found the best, after trying other makes (in the first case, nearly every known plaster). A well-known actor said he had the good fortune to meet with it in the South of England, and had inquired for it wherever he went since. It is the only plaster he can find to answer for fixing false hair, &c. A chemist in the North wrote and said a lady violinist would have nothing else; she uses it to make a pad to protect her fingers. A chemist in Yorkshire has a customer who uses plaster to keep his eyes open, and nothing will hold the lids up so well as "The Leicester" Improved Adhesive Plaster on Fine Flesh-coloured Cambric. Surgeons in all parts are frequently commending it. The Sale rapidly increases.

THE SURGEONS' LINT,

V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The C., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME,

London Agents—B. PRATT & CO., 1 Wood Street, E.C.

Spinner and Manufacturer,
JERSEY ST. MILLS, ANCOATS, **MANCHESTER.**

Telegraphic Address—"Newsome, Ancoats," Manchester.

MEDICINAL GELATINE CAPSULES

						Containing	30	36	48
Cascara Sagrada (5 mins.), in round boxes	Per dozen	8/6	In oval screw-cap bottles	—	—	—	—	—	—
Castor Oil, in square boxes	...	5/-	Ditto ditto	5/6	—	8/-	—	—	—
Cod Liver Oil, in square boxes	...	7/-	Ditto ditto	—	8/-	—	—	—	—
Copaiba, without Name, in oval boxes	...	4/9	Ditto ditto	5/6	—	8/-	—	—	—
Copaiba, with or without Name, best, in oval boxes	...	5/9	Ditto ditto	6/6	—	9/-	—	—	—
Copaiba, Flexible, in oval boxes	...	6/-	Ditto ditto	6/9	—	9/6	—	—	—
Copaiba, Flexible, larger, in oval boxes	...	8/-	Ditto ditto	—	10/-	—	—	—	—
Copaiba and Cubeb, in square boxes	...	9/-	Ditto ditto	—	11/-	—	—	—	—
Copaiba, Cubeb, and Buchu, in oval boxes	...	8/-	Ditto ditto	—	10/-	—	—	—	—
Copaiba, Cubeb, and Sandal-wood Oil, Flexible, in oval boxes	...	17/-	Ditto ditto	17/-	—	25/-	—	—	—
Oil of Male Fern (18 drops), in square boxes	...	17/-	Ditto ditto	—	18/-	—	—	—	—
Sandal-wood Oil, Flexible, English, in round boxes	...	26/-	Ditto ditto	—	30/-	—	—	—	—
Sandal-wood Oil, Flexible, Foreign, in round boxes	...	20/-	Ditto ditto	—	23/-	—	—	—	—
Tar, Norwegian, in square boxes	...	6/-	Ditto ditto	—	7/-	—	—	—	—
Terebene, pure (10 drops), in round boxes	...	7/-	Ditto ditto	8/-	—	12/-	—	—	—
Turpentine, in square boxes	...	6/-	Ditto ditto	—	7/-	—	—	—	—

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S. MAW, SON & THOMPSON, LONDON.



HUNT'S BOTTLE CAPS

Pleated Paper, from 8d.
per Gross.

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CORPORATION, LIMITED,
84-5 King William Street, London, E.C.

"The Popular Winter Medicine and Non-Alcoholic Stimulant."

COMPOSITION ESSENCE.

Unequalled for its AROMA and STRENG'TH.

9½d. per lb. in Winchester Quarts; and 8½d. per lb. in 10 Gallon Casks. 5 per cent. discount.

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Notice of Advance in Price.

I beg to give you notice that after the First day of January, 1889, my Preparations as undermentioned will be advanced to the prices named below.

I intend to advertise them very extensively this year.

Thanking you for past favours, and trusting to merit a continuance of your esteemed orders,

Yours faithfully,

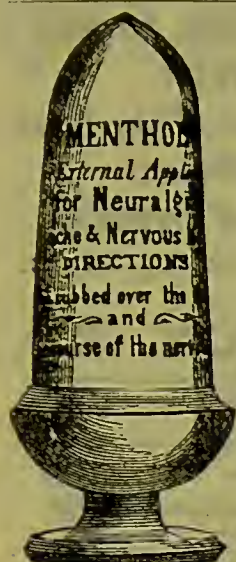
W. B. MASON.

Killcorm per doz.	10/0	2/6 Gould's American Syrup "	20/0
1/0 Ferguson's Compound Glycerine Balm "	10/0	1/1½ Dr. Brown's Cough Cure "	10/0
2/6 " " " " " " "	25/0	2/9 " " " " " " "	25/0
2/8 Dr. Munro's Asthma Cure "	20/0	10% Discount for Cash.	

£5 ORDERS AND UPWARDS CARRIAGE PAID. CASES FREE.

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A1 BRAND. SHIRLEY'S MENTHOL CONES.



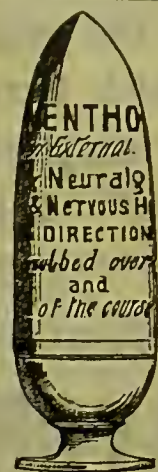
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Cocaine & Menthol
Toothache Tube,
3/6 doz.
SELLING FREELY.

IMPORTANT ALTERATIONS IN PRICES.

Always Order as A1 Brand.

No.	DESCRIPTION.	Per gross.	Per doz.
1	6d. Glass	30/	3/
11	6d. Boxwood Pedestal, each in a box	33/	3/4
11a	6d. " " 12 in a box	30/	3/
14a	1s. " " "	63/	6/3
6	6d. " " (larger), 12 in a box	36/	3/6
7s	6d. Boxwood Barrel, 12 in a box	36/	3/6
9s	6d. " Skittle "	36/	3/6
17s	6d. " Draughtsman, 12 in a box...	38/	3/9
100	2d. Willow Round Boxes	12/	1/5
101	3d. " Acorn.....	17/	1/10
106	Willow Pedestal, highly polished, shape as No. 11	20/	2/
107	" " " " " No. 6	23/	2/3
109	Willow Pedestal, larger.....	26/	2/6
108	" Draughtsman	24/	2/4
111	Boxwood, large Pedestal Acorn, plain cases	72/	7/
112	" Cartridge shape, plain cases	36/	3/6
113	" Draughtsman "	33/	3/3



Nos. 11 and 11A.

ORDER
AS A1 BRAND.

ILLUSTRATED
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110	1d. Menthol, Bottle shape, 3 dozen on a card	7/6	{	Those who are obliged to sell cheap goods will find these far eclipse anything ever offered. The Al Brand does not appear on the label, but the Menthol is guaranteed Pure.
110v	1d. " Vase " 3 " "	7/6		

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CORN & BUNION PLASTERS.

CORN.		£	s.	d.
Amadou.....	per gross	0	1	10
Ditto, 12 in a box.....	per doz. boxes	0	2	6
White Felt, per gross, thin, 1/6				
	thick	0	2	0
Ditto, 12 in a box, per doz. boxes,				
	thin, 2/-, thick	0	2	6
Ditto, 24 in a box (12 each thin and				
	thick), per doz. boxes	0	4	6
White Felt, Arnica, per gross, thin, 1/6				
	thick	0	2	0
Ditto, 12 in a box, per doz. boxes,				
	thin, 2/-, thick	0	2	6
Ditto, 24 in a box (12 each thin and				
	thick), per doz. boxes	0	4	6

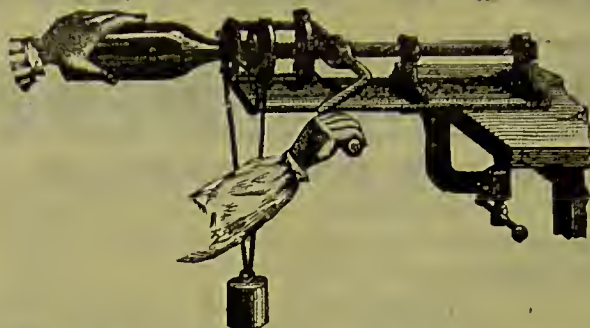
B U N I O N.		£	s.	d.
Amadou	per gross	0	4	6
Ditto, 6 in a box	per doz. boxes	0	3	0
White Felt, per gross, thin, 3/6, thick		0	5	0
Ditto, 6 in a box, per doz. boxes,	thin, 2/6, thick	0	3	3
Ditto, 12 in a box (6 each thin and	thick), per doz. boxes	0	5	6
White Felt, Arnica, per gross, thin, 3/6	thick	0	5	0
Ditto, 6 in a box, per doz. boxes,	thin, 2/6, thick	0	3	3
Ditto, 12 in a box (6 each thin and	thick), per doz. boxes	0	5	6

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The only Machine
which leaves no crease
or pleat on the
Capsule.

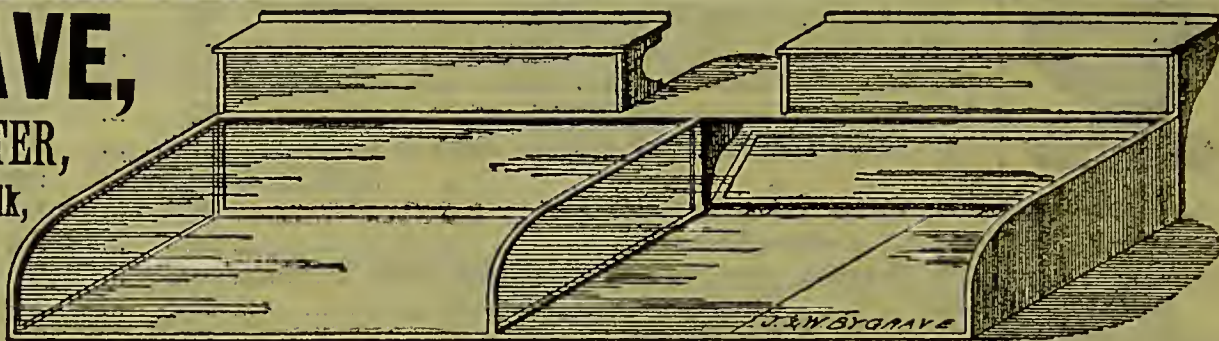


Can be fixed to any
Counter.
A single pull of the lever
is sufficient
to fix the Capsule.

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Bent-top plate-glass Counter Showcase, in French polished mahogany, or ebonized, with two upright mirror plate-glass fronted shelves, and table in centre for serving over, and mahogany falls at back lined with mirror plate glass, inside fitted with crimson velvet trays—if 5 ft. long, 18 in. wide, 8 in. high (total height 13 in.). £5 10s.; 5 per cent. off for cash

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(GRIFFIN'S PATENT),

ALBION TIN WORKS, YORK ROAD, KING'S CROSS, LONDON, N.

Telegraphic Address—"TIN BOX LONDON."



Boxes ready made up, or the Patent Tops only (ready for making up), are supplied.

THE NEW TIN BOXES for all kinds of
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Sealed Preserved Foods, DRUGS and CHEMICALS.

THE NEW TIN BOXES are as cheap as
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Boxes, require no soldering up, and can be opened with a
penny piece.

THE NEW TIN BOXES are being adopted
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Food-preserving Houses and CHEMISTS, to whom
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THE NEW TIN BOXES are also perfect
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Coffee Canisters, Biscuit Boxes, Confectionery, Paints,
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THE NEW TIN BOXES are described by the *Times*, *Standard*, *Chronicle*, *Illustrated News*, *Engineer*,
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most elegant invention ever made."

CHEST PROTECTORS

	No. 1	2	3	4	5	
SINGLE, White or Scarlet Felt.....	8½×9¼ 5/	9¼×10¼ 8/3	11×12 11/	12½×14¼ 13/6	13½×15½ 17/6	per dozen.
Chamois Leather	6/	9/6	11/9	16/	19/6	„
DOUBLE (in one piece), White or Scarlet Felt ...	15/	21/	27/	33/	40/	„
Chamois and Flannel	16/6	23/6	29/	38/	44/	„
DOUBLE (in two pieces), White or Scarlet Felt ...	12/	16/	21/	27/6	37/	„
Chamois and Flannel	13/6	17/6	21/9	30/	39/	„
Hareskin.....	8×9¼, 15/; 9¼×11, 18/6; 11×12½, 20/					„

BEST QUALITY FELT.

WELL MADE.

SALEABLE.

“RECORD BEATEN.”

A 1s. Earthenware Inhaler produced at last.



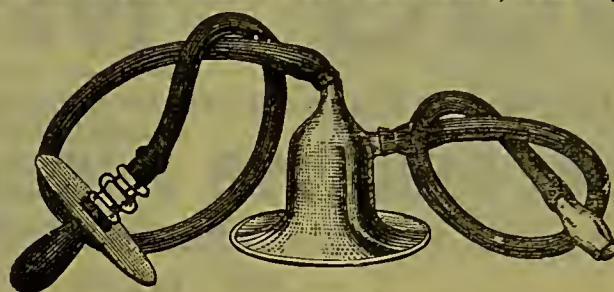
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Price 6/6 dozen.

Fitted with our New Registered Mouth-piece to enable tubes to be used separately, and to prevent the child sucking air.

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Each in box, with spare tube and brushes, and equal to most 1/6 feeders. 5/6 per doz. Send for sample dozen.

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CARBOLIC POWDER, £4 TON.

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PALE CARBOLIC ACID, 99 per cent. (No. 5), and CHLORIDE OF LIME below market prices.

CRUDE CARBOLIC ACID (Brown), 9d., 1/-, and 1/6 Gallon.

DARK SANITARY FLUID (to be used with 80 parts of water, making a *milky fluid*), 2/- PER GALLON.

10 PER CENT. DISCOUNT OFF ABOVE PRICES FOR CASH WITH ORDER.

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For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, swellings and relaxed tendons in Horses. For paining after calving and lambing, and for swollen udders and sore feet.

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Unmatched for colic or gripes and debility in Horses, for colds, chills, shivering fits, flux and diarrhoea in Cattle, Calves, and Sheep. For Ewes weakly after lambing and blown Cattle and Sheep, its effects are marvellous.

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Used as landannm in uncontrollable spasmodic pains and violent bowel complaints. Invaluable for parturition in Mares, Cows, and Ewes.

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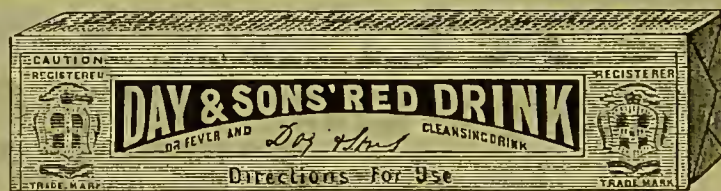
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FOR Debility and Chills in all Stock.
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FOR Moven or Blown Cattle and Sheep.
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FOR Weakness after Lambing or Calving.

PRICE—10/ PER HALF-DOZEN, OR 19/ PER DOZEN.



FOR Healing all wounds in all Animals.
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CHEMICALS
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60 o.p., 18/9 per gall.; 56 o.p., 18/3 per gall.

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